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**Vol. IV**

*166*

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*U.S.S.C.*

**TRANSCRIPT OF RECORD**

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**Supreme Court of the United States**

**OCTOBER TERM, 1937**

**No. 313**

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**LONE STAR GAS COMPANY, APPELLANT,**

**vs.**

**STATE OF TEXAS, THE RAILROAD COMMISSION  
OF TEXAS, ET AL.**

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**APPEAL FROM THE COURT OF CIVIL APPEALS FOR THE THIRD  
SUPREME JUDICIAL DISTRICT OF THE STATE OF TEXAS**

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**FILED AUGUST 13, 1937.**



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vs.

STATE OF TEXAS, THE RAILROAD COMMISSION  
OF TEXAS, ET AL

APPEAL FROM THE COURT OF CIVIL APPEALS FOR THE THIRD  
SUPREME JUDICIAL DISTRICT OF THE STATE OF TEXAS

VOL. IV

INDEX.

Record from District Court of Travis County—Continued.

Statement of facts of trial on the merits—Continued.

Defendant's Exhibits—Continued.

Original      Print

No. 14—Statement Showing Lone Star Gas Company's Revenues, Expenses, and Amount Available for Return Calculations Based on Actual Operating Expenses as Reflected by Company's Books for Twelve Months Ended April 30th, 1934, on Public Service Operations.	4039	2304
No. 15—Agreement Between Lone Star Gas Company and Municipal Gas Company, dated September 30th, 1931.....	4043	2306
No. 16—Agreement Between Lone Star Gas Company and Municipal Gas Company, dated December 3rd, 1930.....	4048	2312
No. 17—Agreement Between Lone Star Gas Company and Municipal Gas Company, dated November 28th, 1927.....	4054	2317

## Record from District Court of Travis County—Continued.

## Statement of facts of trial on the merits—Continued.

## Defendant's Exhibits—Continued.

	Original	Print
No. 18—Agreement Between Lone Star Gas Company and Gainesville Gas & Electric Company, dated July 1st, 1927.....	4059	2323
No. 19—Agreement Between Lone Star Gas Company and The Dallas Gas Company, dated May 15, 1925.....	4004	2328
No. 20—Agreement Supplementing Agreement dated August 14th, 1925, Between Lone Star Gas Company and The Dallas Gas Company..	4069	2334
No. 21—Renewal and Extension of Contract Between Lone Star Gas Company and The Dallas Gas Company, dated June 7, 1930.....	4071	2336
No. 22—Agreement Between Lone Star Gas Company and Community Natural Gas Company, dated May 15, 1931.....	4073	2337
No. 23—Agreement Between Lone Star Gas Company and Waxahachie Gas Company, dated October 6, 1933.....	4079	2342
No. 24—Agreement Between Lone Star Gas Company and County Gas Company, dated May 15, 1925.....	4085	2348
No. 25—Agreement Supplementing Agreement dated May 15, 1925, between Lone Star Gas Company and County Gas Company, dated September 21, 1926.....	4091	2354
No. 26—Renewal and Extension of Contract Between Lone Star Gas Company and County Gas Company; dated June 7, 1930.....	4094	2357
No. 27—Agreement between Lone Star Gas Company and Texas Cities Gas Company, dated September 15, 1933.....	4097	2357
No. 28—Appraisal—Cost of Reproduction New for Lone Star Gas Company, January 1, 1933, Public Service Plant, Property and Business; Exclusive of Fort Worth Division.....	4103	2363

[fol. 4025]

## • Section No. 5

The schedules in this section of the report explain and set out in detail the several adjustments and eliminations made by the Railroad Commission and as set out in their Opinion and Order dated September 13th, 1933.

[fol. 4026]

## Lone Star Gas Company

## Summary of Adjustments

Twelve Months Ended December 31st, 1931	Additions	Deductions
Gas Purchased.....		\$
Management Fees and Expenses.....		91,375.38
Regulatory Commission Expense.....		
Dry Hole Expense.....	\$13,581.56	
Cancelled and Surrendered Leases.....		140,090.23
Miscellaneous Deductions.....		1,146.89
Total.....	\$13,581.56	\$232,612.50
		13,581.56
Net Deduction Made by Commission.....		\$219,030.94

Twelve Months Ended December 31st, 1932		
Gas Purchased.....	\$70,227.30	
Management Fees and Expenses.....		\$87,197.87
Regulatory Commission Expense.....		151,316.47
Dry Hole Expense.....	56,347.38	
Cancelled and Surrendered Leases.....		118,382.40
Miscellaneous Deductions.....		8,134.76
Total.....	\$126,574.68	\$365,031.50
		126,574.68
Net Deduction Made by Commission.....		\$238,456.82

Twelve Months Ended June 30th, 1933		
Gas Purchased.....	\$89,669.36	
Management Fees and Expenses.....		\$83,573.88
Regulatory Commission Expense.....		93,645.23
Dry Hole Expense.....	54,888.58	
Cancelled and Surrendered Leases.....		71,305.21
Miscellaneous Deductions.....		10,011.38
Total.....	\$144,557.94	\$258,535.70
		144,557.94
Net Deduction Based on Findings by Commission.....		\$113,977.76

[fol. 4027]

Twelve Months Ended December 31st, 1933	Additions	Deductions
Gas Purchased.....	\$95,598.22	
Management Fees and Expenses.....		\$75,940.60
Regulatory Commission Expense.....		49,302.30
Dry Hole Expense.....	49,759.99	
Cancelled and Surrendered Leases.....		15,953.42
Miscellaneous Deductions.....		1,637.99
Total.....	\$145,358.21	\$142,834.31
	142,834.31	
Net Addition Based on Findings by Commission.....	\$2,523.90	

## Defendant's Exhibit No. 13—Continued

## Twelve Months Ended March 31st, 1934

Gas Purchased.....	\$102,004.55	
Management Fees and Expenses.....		\$77,110.16
Regulatory Commission Expense.....		38,714.09
Dry Hole Expense.....	49,242.94	
Cancelled and Surrendered Leases.....	3,314.41	
Miscellaneous Deductions.....		1,611.06

Total.....	\$154,561.90	\$117,435.31
	117,435.31	

Net Addition Based on Findings by Commission.....

\$37,126.59

[fol. 4028]

## Gas Purchased

## Twelve Months Ended December 31st, 1931

No Adjustments for this Period

## Twelve Months Ended December 31st, 1932

Adjustment made by Commission to allow for gas delivered from properties formerly owned by Meridian Gas Company and as set out on page 77 of opinion and order..... \$70,227.30

## Twelve Months Ended June 30th, 1933

Adjustment made in conformity with treatment of gas delivered from property formerly owned by Meridian Gas Co., which was acquired by Lone Star Gas Co. January 1st, 1932:

Gas delivered at Banner Measuring Station from Chickasha Field.....	680,000 M.C.F.	
Contract price prior to acquisition by Lone Star Gas Co. per MCF.....	\$ .15	
Amount.....		\$102,000.00

Less: Gas purchased by Lone Star Gas Co., from other well owners in Chickasha Field, which is included in above delivery at Banner Station...	154,133 M.C.F.	
Field price—per M.C.F.....	\$ .08	
Amount.....		12,330.64

Net Adjustment..... \$89,669.36

[fol. 4029]

## Twelve Months Ended December 31st, 1933

Adjustment made in conformity with treatment by Commission of gas delivered from property formerly owned by Meridian Gas Co., which was acquired by Lone Star Gas Co., January 1st, 1932:

Gas delivered at Banner Measuring Station from Chickasha Field.....	669,538 M.C.F.	
Contract price prior to acquisition by Lone Star Gas Co., per M.C.F.....	\$ .15	
Amount.....		\$100,430.70

Less: Gas Purchased by Lone Star Gas Co., from other well owners in Chickasha Field, which is included in above delivery at Banner Station...	60,406 M.C.F.	
Field Price—per M.C.F.....	\$ .08	
Amount.....		\$4,832.48

Net Adjustment..... \$95,598.22

## Defendant's Exhibit No. 13—Continued

## Twelve Months Ended March 31st, 1934

Adjustment made in conformity with treatment by Commission of gas delivered from property formerly owned by Meridian Gas Co., which was acquired by Lone Star Gas Co., January 1st, 1932:

Gas delivered at Banner Measuring Station from Chickasha Field.....

761,057 M.C.F.

Contract price prior to acquisition by Lone Star Gas Co.—Per M.C.F.....

\$.15

Amount.....

\$114,158.55

Less: Gas purchased by Lone Star Gas Co., from other well owners in Chickasha Field, which is included in above delivery at Banner Station.....

151,925 M.C.F.

Field price—per M.C.F.....

\$.08

Amount.....

12,154.00

Net Adjustment.....

\$102,004.55

[fol. 4030]

## Management Fees and Expenses

## Twelve Months Ended December 31st, 1931

Actual amount paid by Company and so reflected on their books of account.....

\$91,375.38

Based on finding of Commission and as discussed on pages 9-11 of Opinion and Order.....

None

Adjustment.....

\$91,375.38†

## Twelve Months Ended December 31st, 1932

Actual amount paid by Company and so reflected on their books of account.....

\$87,197.87

Based on finding of Commission.....

None

Adjustment.....

\$87,197.87†

## Twelve Months Ended June 30th, 1933

Actual amount paid by Company and so reflected on their books of account.....

\$83,573.88

Based on finding of Commission.....

None

Adjustment.....

\$83,573.88†

## Twelve Months Ended December 31st, 1933

Actual amount paid by Company and so reflected on their books of account.....

\$75,940.60

Based on finding of Commission.....

None

Adjustment.....

\$75,940.60†

## Twelve Months Ended March 31st, 1934

Actual amount paid by Company and so reflected on their books of account.....

\$77,110.16

Based on finding of Commission.....

None

Adjustment.....

\$77,110.16†

† Red in copy.

## Defendant's Exhibit No. 13—Continued

[fol. 4031]

## Regulatory Commission Expense

## Twelve Months Ended December 31st, 1931

Actual expense incurred by Company and so reflected on their books of account.....	\$17,695.86
Based on finding of Commission and as set out on page 14 of Opinion and Order.....	17,695.86
Adjustment.....	None

## Twelve Months Ended December 31st, 1932

Actual expense incurred by Company and so reflected on their books of account.....	\$163,739.01
Based on finding of Commission and as set out on page 77 of Opinion and Order.....	12,422.54
Adjustment.....	\$151,316.47†

## Twelve Months Ended June 30th, 1933

Actual expense incurred by Company and so reflected on their books of account.....	\$108,735.10
Based on finding of Commission that this expense should be amortized over a ten year period:	
Amortization of 1932 expense.....	\$12,422.54
Amortization of 1933 expense.....	2,667.33
Adjustment.....	\$93,645.23†

## Twelve Months Ended December 31st, 1933

Actual expense incurred by Company and so reflected on their books of account.....	\$66,792.39
Based on finding of Commission that this expense should be amortized over a period of ten years:	
Amortization of 1932 expense.....	\$12,422.54
Amortization of 1933 expense.....	5,067.55
Adjustment.....	\$49,302.30†

## Twelve Months Ended March 31st, 1934

Actual expense incurred by Company and so reflected on their books of account.....	\$56,204.18
Based on finding of Commission that this expense should be amortized over a ten year period:	
Same amortization charge used as for year 1933.....	17,490.09
Adjustment.....	\$38,714.09†

[fol. 4032]

## Dry Hole Expense

## Twelve Months Ended December 31st, 1931

Actual amount charged and so reflected by Company's books of account.....	\$65,871.56
Commission used average for five years ending Dec. 31st, 1931, as shown on page 12 of Opinion and Order.....	79,453.12
Adjustment.....	\$13,581.56

† Red in copy.



## Defendant's Exhibit No. 13—Continued

## Dry Hole Expense—Continued

## Twelve Months Ended December 31st, 1932

Actual amount charged and so reflected by Company's books of account..... \$14,288.55

Based on finding of Commission that five year average should be used, which would be:

Year 1928.....	\$29,561.61
1929.....	47,423.77
1930.....	196,034.17
1931.....	65,871.56
1932.....	14,288.55

Total..... \$353,179.66

Yearly Average..... 70,635.93

Adjustment..... \$56,347.38

## Twelve Months Ended June 30th, 1933

Actual amount charged and so reflected by Company's books of account..... \$15,747.35

Yearly average for five years ended December 31st, 1932, and as shown above used for this period..... 70,635.93

Adjustment..... \$54,888.58

[fol. 4033]

## Twelve Months Period Ended December 31st, 1933

Actual amount charged and so reflected by Company's books of account..... \$18,704.52

Based on finding of Commission that five year average should be used, which would be:

Year 1929.....	\$47,423.77
1930.....	196,034.17
1931.....	65,871.56
1932.....	14,288.55
1933.....	18,704.52

Total..... \$342,322.57

Yearly Average..... 68,464.51

Adjustment..... \$49,759.99

## Twelve Months Ended March 31st, 1934

Actual amount charged and so reflected by Company's books of account..... \$10,221.57

Yearly average for five years ended December 31st, 1933, and as shown above, used for this period..... 68,464.51

Adjustment..... \$49,242.94

[fol. 4034]

## Cancelled and Surrendered Leases

## Twelve Months Ended December 31st, 1931

Actual amount charged off by Company and so reflected on their books of account..... \$239,230.96

Commission used average for five years ending December 31st, 1931, as shown on page 12 of Opinion and Order.... 99,140.73

Adjustment..... \$140,090.23†

† Red in copy.



## Defendant's Exhibit No. 13—Continued

## Twelve Months Ended December 31st, 1932

Actual amount charged off by Company and so reflected on their books of account.....		\$255,829.03
Based on finding of Commission that five year average should be used, which would be:		
Year 1928.....	\$12,480.59	
1929.....	75,523.70	
1930.....	104,168.87	
1931.....	239,230.96	
1932.....	255,829.03	
Total.....	\$687,233.15	
Yearly Average.....		137,446.63
Adjustment.....		<u>\$118,382.40†</u>

## Twelve Months Ended June 30th, 1933

Actual amount charged off by Company and so reflected on their books of account.....	\$208,751.84
Yearly average for five years ended December 31st, 1932, and as shown above, used for this period.....	137,446.63
Adjustment.....	<u>\$71,305.21†</u>

[fol. 4035]

## Twelve Months Ended December 31st, 1933

Actual amount charged off by Company and so reflected by their books of account.....	\$188,629.92
Based on finding of Commission that five year average should be used, which would be:	
Year 1929.....	\$75,523.70
1930.....	104,168.87
1931.....	239,230.96
1932.....	255,829.03
1933.....	188,629.92
Total.....	\$863,382.48
Yearly Average.....	172,676.50
Adjustment.....	<u>\$15,953.42†</u>

## Twelve Months Ended March 31st, 1934

Actual amount charged off by Company and so reflected by their books of account.....	\$169,362.09
Yearly average for five years ended December 31st, 1933, and as shown above, used for this period.....	172,676.50
Adjustment.....	<u>\$3,314.41</u>

[fol. 4036]

## Miscellaneous Deductions

## Twelve Months Ended December 31st, 1931

Adjustment made by Auditors for Commission, wherein they disallowed as a deduction from Gross Income, the loss on materials sold by the Company from their warehouses.....	\$1,146.89
--	------------

† Red in copy:

## Defendant's Exhibit No. 13—Continued

## Twelve Months Ended December 31st, 1932

Adjustment made by Auditors for Commission, wherein they disallowed as a deduction from Gross Income, the loss on materials sold by the Company from their warehouses..... \$8,134.76

## Twelve Months Ended June 30th, 1933

Giving effect to same class of charges to which Commission Auditors took exception and eliminated from charges as a deduction from Gross Income..... \$10,011.38

## Twelve Months Ended December 31st, 1933

Giving effect to same class of charges to which Commission Auditors took exception and eliminated from charges as a deduction from Gross Income..... \$1,637.99

## Twelve Months Ended March 31st, 1934

Giving effect to same class of charges to which Commission Auditors took exception and eliminated from charges as a deduction from Gross Income..... \$1,611.06

[fols. 4037-4038]

## Gas Sales Adjustment

## Twelve Months Ended December 31st, 1931

Domestic Gas Sales—M. Cu. Ft..... 17,023,686.7  
Reduction found by Commission and set out in their Order dated September 13th, 1933—per M Cu. Ft..... \$.08  
Reduction in Domestic Gas Sales, as shown on page 78 of Opinion and Order..... \$1,361,894.94

## Twelve Months Ended December 31st, 1932

Domestic Gas Sales—M Cu. Ft..... 16,651,688  
Reduction found by Commission and set out in their Order dated September 13th, 1933—per M Cu. Ft..... \$.08  
Reduction in Domestic Gas Sales, as shown on Page 78 of Opinion and Order..... \$1,332,135.04

## Twelve Months Ended June 30th, 1933

Domestic Gas Sales—M Cu. Ft..... 15,792,306  
Reduction found by Commission and set out in their Order dated September 13th, 1933—per M Cu. Ft..... \$.08  
Reduction in Domestic Gas Sales..... \$1,263,384.48

## Twelve Months Ended December 31st, 1933

Domestic Gas Sales—M Cu. Ft..... 13,944,833  
Reduction found by Commission and set out in their Order dated September 13th, 1933—per M Cu. Ft..... \$.08  
Reduction in Domestic Gas Sales..... \$1,115,586.64

## Twelve Months Ended March 31st, 1934

Domestic Gas Sales—M Cu. Ft..... 14,389,405  
Reduction found by Commission and set out in their Order dated September 13th, 1933—per M Cu. Ft..... \$.08  
Reduction in Domestic Gas Sales..... \$1,151,152.40

[fol. 4039] DEFENDANT'S EXHIBIT No. 14

Lone Star Gas Company

Public Service Operations

Statement of Revenues, Expenses, and Amount Available  
for Return

Calculations Based On Actual Operating Expenses as Re-  
flected by Company's Books

Twelve Months Ended April 30th, 1934

[fol. 4040] Basis of Calculations in Following Statement

"A"

Gas Sales—Actual 40¢ per M Cu. Ft. Domestic Gate Rate.  
Operating Expenses—Actual as reflected by Company's  
books.

Depreciation and Depletion—As determined by Commis-  
sion.

Federal Income Tax—Amount shown as available for  
return calculated @ 13.75%.

Rate Base—As determined by Commission.

"B"

Gas Sales—Based on 32¢ Domestic Gate Rate.  
Operating Expenses—Actual as reflected by Company's  
books.

Depreciation and Depletion—As determined by Commis-  
sion.

Federal Income Tax—Amount shown as available for  
return calculated @ 13.75%.

Rate Base—As determined by Commission.

"C"

Gas Sales—Based on 32¢ Domestic Gate Rate.  
Operating Expenses—Actual as reflected by Company's  
books.

Depreciation and Depletion—Based on Commission rate  
applied to Rate Base.

Federal Income Tax—Amount shown as available for re-  
turn calculated @ 13.75%.

Rate Base—Cost as reflected by Company's books.

# Defendant's Exhibit No. 14—Continued

[fols. 4041-4042]

Lone Star Gas Company  
Public Service Operations

## Statement of Revenues, Expenses, and Amount Available for Return Twelve Months Ended April 30th, 1934 (See Preceding Page for Basis of Calculation)

	"A"			"B"			"C"		
Gross Revenues									
Gas Sales.....	\$7,921,446.79			\$6,775,215.11			\$6,775,215.11		
Misc'l. Operating Revenues.....	1,640.51			1,604.51			1,604.51		
Other Non-Oper. Revenues.....	35,431.08			35,431.08			35,431.08		
Total.....	\$7,958,518.38			\$6,812,250.70			\$6,812,250.70		
Deductions from Gross Income									
Gas Purchased.....	\$1,093,297.36			\$1,093,297.36			\$1,093,297.36		
Production System Expense.....	88,159.42			88,159.42			88,159.42		
Gathering System Expense.....	132,979.91			132,979.91			132,979.91		
Transmission System Expense.....	428,557.04			428,557.04			428,557.04		
Compressor Station Expense.....	349,311.51			349,311.51			349,311.51		
New Business Expense.....	102,140.30			102,140.30			102,140.30		
General Expense.....	709,509.23			709,509.23			709,509.23		
Uncollectible Bills.....	6,474.03			6,474.03			6,474.03		
Taxes—Other than Federal.....	360,476.91			360,476.91			360,476.91		
Management Fees & Expenses.....	78,244.38			78,244.38			78,244.38		
Regulatory Commission Expense.....	44,361.36			44,361.36			44,361.36		
Dry Hole Expense.....	19,244.38			19,244.38			19,244.38		
Cancelled & Surrendered Leases.....	172,958.04			172,958.04			172,958.04		
Total.....	\$3,585,713.87			\$3,585,713.87			\$3,585,713.87		
Available for Depreciation, Depletion, Federal Income Tax, and Return									
Depreciation and Depletion.....	\$4,372,804.51			\$3,226,536.83			\$3,226,536.83		
	1,001,440.56			1,001,440.56			1,057,159.66		
Available for Federal Income Tax and Return									
Federal Income Tax.....	\$3,371,363.95			\$2,225,096.27			\$2,169,377.17		
	463,562.54			305,950.74			298,289.36		
Available for Return									
Rate Base.....	\$2,907,801.41			\$1,919,145.53			\$1,871,087.81		
Available for Return Per Cent of Rate Base.....	\$47,192,765.79			\$47,192,765.79			\$49,858,751.23		
	6.17			4.07			3.76		

## [fol. 4043]      DEFENDANT'S EXHIBIT No. 15

This Agreement, Made and entered into by and between Lone Star Gas Company, a Texas corporation hereinafter styled Vendor, and Municipal Gas Company, a Texas corporation hereinafter styled Vendee,

Witnesseth:

## I

That Vendor has agreed to sell and deliver to the Vendee, and Vendee has agreed to purchase and receive from the Vendor, subject to the terms, conditions, and limitations hereinafter set out, all of the natural gas necessary to meet the requirements of the domestic consumers supplied by Vendee in the following territory:

(a) Within the town or city of Iowa Park, Texas, and the suburbs thereof;

(b) Along Vendor's eighteen-inch gas pipe line extending from its junction point with Vendor's ten-inch pipe line east of Wichita Falls, Texas, to the town or city of Iowa Park.

The term of this agreement shall be for five years from November 10th, 1931.

## II

The natural gas sold and purchased hereunder shall be delivered by Vendor to Vendee at Vendor's present gas measuring station near the town or city of Iowa Park, and at such other taps along the Vendor's said eighteen-inch gas transportation line between Iowa Park and Wichita Falls as shall hereafter be agreed upon in writing by the parties hereto.

Vendor agrees, at its own expense, to make for Vendee one tap on said eighteen-inch line north of Wichita Falls, but all additional taps made shall be at the expense of Vendee.

Each tap made along Vendor's said gas transportation line shall be deemed a delivery point within the meaning of this contract.

## III

The natural gas to be sold by Vendor and purchased by Vendee shall be measured, with the exceptions hereinafter



provided, at the various delivery points by meters of standard type, to be installed, operated, and maintained by Vendor.

It is provided, however, that in rural sections along Vendor's said eighteen-inch gas pipe line where it is not feasible for Vendor to install and operate a master meter to measure the delivery of gas to a tap line of Vendee serving one or more domestic consumers, Vendor shall be entitled to take the monthly readings of Vendee's domestic meters on said tap line as the amount of gas sold by Vendor to Vendee at such tap. In all such cases Vendee shall afford to Vendor or its representative free access to Vendee's said domestic meters and to Vendee's records in so far as they reflect the readings of such domestic meters.

Gas may be delivered and measured by Vendor to Vendee at such pressures as may exist by virtue of operating conditions, but for purposes of payment therefor by Vendee to Vendor, it shall be computed on a pressure basis of eight ounces above 14.4 pounds absolute atmospheric pressure, at sixty degrees Fahrenheit temperature, and without allowance for variations in atmospheric or barometric pressure, [fol. 4044] and with an assumed barometric pressure of 14.4 pounds absolute at the points of measurement. The flowing and storage temperature of the gas shall be considered as sixty degrees Fahrenheit in all measurement computations. Variations in specific gravity of the gas shall be allowed for by determining their monthly mean or average values, and which values shall be applied to the computation of deliveries. In all cases where Vendor's measurements of gas delivered to Vendee are made by positive meters no temperature or specific gravity corrections shall be used in the computation of such gas deliveries.

The Vendee shall have access to the meters of the Vendor, which measure the gas sold hereunder, at any time upon demand for the purpose of inspection, and Vendee at all reasonable times may have tests or calibrations made of Vendor's meters, at Vendee's own expense and in the presence of Vendor's representatives. In the event that Vendee shall install meters to check Vendor's meters, then Vendor shall have the same rights of access to and inspection of Vendee's check meters as Vendee enjoys with reference to Vendor's meters.

## IV

In the event that any of Vendor's meters becomes inoperative or manifestly in error, then the quantity of gas delivered during the period that Vendor's meter was inoperative or manifestly in error shall be determined:

(a) By correcting for the error if such error is ascertainable, during the time of the error;

(b) By computing the deliveries from Vendee's corresponding check meter during the period of error or non-operation of Vendor's meter, if Vendee shall have installed meters of its own as check meters at the several delivery points;

(c) By estimating as nearly as may be possible the quantity of delivery from the delivery during proportionate periods under similar conditions, when such meter was registering accurately.

In the event that Vendor and Vendee shall be unable to agree upon any adjustment for any period when Vendor's meters shall have been inoperative or in error, then the matter shall be determined by three disinterested arbitrators; one to be appointed by the Vendor, one to be appointed by the Vendee, and the two so appointed to select a third. The decision of such arbitrators or any two of them shall be final, and the cost of such arbitration shall be paid one-half by Vendor and one-half by Vendee.

## V.

The Vendor may make deliveries of gas to the Vendee at the maximum pressures carried in its pipe line at the various delivery points. The Vendee shall install, operate, and maintain such regulators and regulator stations as it may require to regulate the pressure of the gas after delivery thereof by Vendor to Vendee. It is expressly agreed that the Vendor shall in no event be liable for any pressure fluctuation at the said delivery points, or for the control of gas pressures after delivery of the gas to the Vendee.

The Vendor will endeavor, subject to all of the limitations hereinafter set out, to deliver gas at the various delivery points at a pressure of not less than twenty pounds where such pressure is required by Vendee.

[fol. 4045]

## VI

The Vendee expressly recognizes that the production and transportation of natural gas by pipe lines is subject to accidents and interruptions, and diminutions of pressure and supply. The Vendor undertakes no obligation toward Vendee other than to deliver to Vendee such gas as Vendor is able to secure from its present sources of supply and such other sources of supply to which it may extend its pipe line system. It is expressly agreed between Vendor and Vendee that Vendor shall not be liable to the Vendee for any failures to deliver gas hereunder, when such failure is occasioned by accidents to or breakage of pipe lines or machinery, diminution or failure of supply occasioned by the failure, depletion, or destruction of gas wells or fields, fires, floods, strikes, riots, explosions, act of God or the public enemy, or, and without limitation by enumeration, any other cause beyond the control of the Vendor.

## VII

It is expressly covenanted and agreed by and between the parties hereto that if either party shall fail to perform any of the covenants or obligations imposed upon it under and by virtue of this contract, then the party offended shall have the right and option to cancel and terminate this contract upon giving the offending party written notice of the violation of such covenant or obligation, and such notice having been given, if the violation complained of is not remedied within ten days, then the termination of this contract shall be deemed complete. The failure of the Vendee to make payments to the Vendor for gas purchased in accordance with the provisions of this contract, shall, among other things, be considered a failure to perform a covenant or obligation of this contract and entitling the Vendor to cancel and terminate the contract.

## VIII

It is further covenanted and agreed that if any court, Governmental regulatory body, or Governmental agency shall subject to review the price to be paid by Vendee for gas purchased from Vendor hereunder, and shall lawfully fix or establish another and different price for such gas, then if said price shall be fixed at any figure less than the price herein provided for, the Vendor shall have the right and option to cancel and terminate this agreement by giving written notice to the Vendee; and if said price shall be fixed



at any figure more than the price herein provided for, then the Vendee shall have the right and option to cancel and terminate this agreement by giving written notice to the Vendor. Such written notice when given by either party shall make the termination of this contract complete.

### IX

The price to be paid by Vendee to Vendor for the gas sold and purchased hereunder shall be at the rate of forty (40¢) cents per thousand cubic feet.

The Vendor will submit to the Vendee by the 15th day of each calendar month a statement showing the amount of gas measured by Vendor's meters and delivered to Vendee during the preceding calendar month, together with the charts from Vendor's meters and the computation of deliveries for such period. These charts and computations shall be returned to Vendor at the time of or previously to the making of the payment for such monthly period. The Vendee by the 12th day of each calendar month shall furnish to the Vendor a statement of the deliveries made by Vendor to Vendee on rural tap lines where Vendor has not measured the gas delivered to Vendee through a master meter.

[fols. 4046-4047] On or before the twentieth day of each calendar month Vendee shall pay to the Vendor at Dallas, Texas, for all gas delivered by Vendor to Vendee during the preceding calendar month according to the gas measurements and computations hereinbefore provided for.

### X

By domestic consumers, as used in this contract, is meant all those consumers using gas in domestic service, and is defined as including the reasonable use of natural gas for heating, lighting, and cooking in private homes, boarding houses, apartment houses, hospitals, and charitable institutions; and this classification shall further extend to those using natural gas for *lighting* and cooking only in hotels, restaurants, bakeries, and stores, and for heating in hotels and buildings where separate rooms are dependent upon natural gas for heating purposes in grates and stoves.

### XI

It is understood that in addition to the gas which Vendor shall deliver to Vendee hereunder to meet the requirements of Vendee's domestic consumers the Vendor will sell and

deliver to the Vendee and the Vendee will purchase and receive from the Vendor gas for manufacturing and industrial purposes, under such terms and conditions as may hereafter be agreed to in writing by the Vendor and the Vendee; provided that in the judgment of the Vendor sufficient gas is available to warrant its sale for such purposes.

Vendee shall be entitled to receive industrial gas from Vendor at such times as Vendor is selling to other distributing companies who are receiving industrial gas from Vendor under substantially similar operating conditions.

## XII

It is understood that during the term of this contract Vendor will supply gas to various other communities and cities, and Vendor agrees that it will not wilfully discriminate in favor of such other communities or cities or against Vendee or Vendee's domestic or industrial consumers in the matter of the apportioning of the supply of gas which Vendor has available. In times of extreme or peak demand Vendor will endeavor, in so far as operating conditions will permit, to apportion the supply of gas among the various communities and cities which it serves in proportion to the number of domestic consumers served in each community or city.

## XIII

All of the covenants, terms, stipulations and provisions of this contract shall extend to and be binding upon the respective successors and assigns of the parties hereto.

Notices provided to be given hereunder shall be deemed sufficiently given and served when and if deposited in the United States mail, postage prepaid and registered, addressed to the Vendor at Dallas, Texas, and to the Vendee at Dallas, Texas.

Witness the execution hereof in duplicate originals on this 30th day of September, 1931.

Lone Star Gas Company, by (signed) F. L. Chase,  
Vice-President.

Attest: (Signed) T. J. Uhl, Asst. Secretary. (Corporate Seal, Lone Star Gas Company, Dallas, Texas.)

Municipal Gas Company, by (signed) J. B. McCabe,  
President.

Attest: (Signed) L. W. Cole, Secretary. (Corporate Seal, 1925, Municipal Gas Company, Texas.)

This agreement, made and entered into by and between Lone Star Gas Company, a Texas corporation, hereinafter styled Vendor, and Municipal Gas Company, a Texas corporation, hereinafter styled Vendee,

Witnesseth:

### I

The Vendor has agreed to sell and deliver to the Vendee, and the Vendee has agreed to purchase and receive from the Vendor; subject to the terms, conditions and limitations hereinafter set out, all of the natural gas necessary to meet the requirements of the domestic consumers supplied by Vendee in the towns and cities of Corsicana, Hillsboro, Waxahachie, Ennis, Cleburne, Wichita Falls, Bowie, Byers, Petrolia, Bellevue, Sunset, Alvord, Bridgeport and Decatur, Texas, and the suburbs thereof, for a term of five (5) years, commencing December 18, 1930, and thereafter until terminated by either party giving to the other party thirty (30) days written notice of termination.

### II

Natural gas sold and purchased hereunder shall be delivered by Vendor to Vendee at the following delivery points:

1. At the present measuring station or stations of Vendor at each said town or city, if such measuring station is located without the corporate limits of such town or city;

2. In those cases where any present measuring station is within the corporate limits of any such town or city, then the delivery point for the gas measured at such station shall be the intersection of Vendor's pipe line, running to said station, with the corporate limits of such town or city.

### III

Natural gas to be sold by Vendor and purchased by Vendee hereunder shall be measured at or conveniently near the several delivery points above named, by orifice meters of standard type, which shall be installed, operated and maintained by the Vendor.

Gas may be delivered and measured by Vendor to Vendee at such pressures as may exist by virtue of operating conditions, but for purposes of payment therefor by Vendee to Vendor, it shall be computed on a pressure basis of eight ounces above 14.4 pounds absolute pressure, at sixty degrees Fahrenheit temperature, and without allowance for variations in atmospheric or barometric pressure, and with an assumed barometric pressure of 14.4 pounds absolute at the points of measurement. The flowing and storage temperature of the gas shall be considered as sixty degrees Fahrenheit in all measurement computations. Variations in specific gravity of the gas shall be allowed for by determining their monthly mean or average values, and which values shall be applied to the computation of deliveries.

The Vendee shall have access to the meters of the Vendor, which measure the gas sold hereunder, at any time upon demand for the purpose of inspection, and Vendee at all reasonable times may have tests or calibrations made of Vendor's meters, at Vendee's own expense and in the presence of Vendor's representatives. In the event that Vendee shall install meters to check Vendor's meters, then Vendor shall have the same rights of access to and inspection of Vendee's check meters as Vendee enjoys with reference to Vendor's meters.

#### IV

In the event that any of Vendor's meters becomes inoperative or manifestly in error, then the quantity of gas delivered during the period that Vendor's meter was inoperative or manifestly in error shall be determined:

(a) By correcting for the error if such error is ascertainable, during the time of the error;

(b) By computing the deliveries from Vendee's corresponding check meter during the period of error or non-operation of Vendor's meter, if Vendee shall have installed meters of its own as check meters at the several delivery points;

(c) By estimating as nearly as may be possible the quantity of delivery from the delivery during proportionate periods under similar conditions, when such meter was registering accurately.




In the event that Vendor and Vendee shall be unable to agree upon any adjustment for any period when Vendor's meters shall have been inoperative or in error, then the matter shall be determined by three disinterested arbitrators, one to be appointed by the Vendor, one to be appointed by the Vendee, and the two so appointed to select a third. The decision of such arbitrators or any two of them shall be final, and the cost of such arbitration shall be paid one-half by Vendor and one-half by Vendee.

## V

The Vendor may make deliveries of gas to the Vendee at the maximum pressures carried in its pipe lines at the various delivery points. The Vendee shall install, operate and maintain such regulators and regulator stations as it may require to regulate the pressure of the gas after delivery thereof by Vendor to Vendee. It is expressly agreed that the Vendor shall in no event be liable for any pressure fluctuation at the said delivery points, or for the control of gas pressures after delivery of the gas to the Vendee. [fol. 4050] The Vendor will endeavor, subject to all of the limitations hereinafter set out, to deliver gas at the various delivery points at an average pressure of not less than twenty (20) pounds per square inch.

## VI

The Vendee expressly recognizes that the production and transportation of natural gas by pipe lines is subject to accidents and interruptions, and diminutions of pressure and supply. The Vendor undertakes no obligation toward Vendee other than to deliver to Vendee such gas as Vendor is able to secure from its present sources of supply and such other sources of supply to which it may extend its pipe line system. It is expressly agreed between Vendor and Vendee that Vendor shall not be liable to the Vendee for any failure to deliver gas hereunder, when such failure is occasioned by accidents to or breakage of pipe lines or machinery, diminution or failure of supply occasioned by the failure, depletion, or destruction of gas wells or fields, fires, floods, strikes, riots, explosions, act of God or the public enemy, or, and without limitation by enumeration, any other cause beyond the control of the Vendor.



## VII

It is expressly covenanted and agreed by and between the parties hereto that if either party shall fail to perform any of the covenants or obligations imposed upon it under and by virtue of this contract, then the party offended shall have the right and option to cancel and terminate this contract upon giving the offending party written notice of the violation of such covenant or obligation, and such notice having been given, if the violation complained of is not remedied within ten days, then the termination of this contract shall be deemed complete. The failure of the Vendee to make payments to the Vendor for gas purchased in accordance with the provisions of this contract shall, among other things, be considered a failure to perform a covenant or obligation of this contract and entitling the Vendor to cancel and terminate the contract.

## VIII

It is further covenanted and agreed that if any court, Governmental regulatory body, or Governmental agency shall subject to review the price to be paid by Vendee for gas purchased from Vendor hereunder, and shall lawfully fix or establish another and different price for such gas, then if said price shall be fixed at any figure less than the price herein provided for, the Vendor shall have the right and option to cancel and terminate this agreement by giving written notice to the Vendee; and if said price shall be fixed at any figure more than the price herein provided for, then the Vendee shall have the right and option to cancel and terminate this agreement by giving written notice to the Vendor. Such written notice when given by either party shall make the termination of this contract complete.

[fol. 4051]

## IX

The price to be paid by Vendee to Vendor for the gas sold and purchased hereunder shall be at the rate of forty (40¢) cents per thousand cubic feet.

The Vendor will submit to the Vendee by the fifteenth day of each calendar month a statement showing the amount of gas delivered to Vendee during the preceding calendar month, together with the charts from Vendor's meters, and the computation of deliveries for such period. These charts and computations shall be returned to Vendor at the time

of or previously to the making of the payment for such monthly period.

On or before the twentieth day of each calendar month Vendee shall pay to the Vendor at Dallas, Texas, for all gas delivered by Vendor to Vendee during the preceding calendar month according to the gas measurements and computations hereinbefore provided for.

## X

By domestic consumers, as used in this contract, is meant all those consumers using gas in domestic service and is defined as including the reasonable use of natural gas for heating, lighting and cooking in private homes, boarding houses, apartment houses, hospitals and charitable institutions; and this classification shall further extend to those using natural gas for lighting and cooking only in hotels, restaurants, bakeries and stores, and for heating in hotels and buildings where separate rooms are dependent upon natural gas for heating purposes in grates and stoves.

## XI

It is understood that, in addition to the gas which Vendor shall deliver to Vendee hereunder to meet the requirements of Vendee's domestic consumers, the Vendor will sell and deliver to the Vendee and the Vendee will purchase and receive from the Vendor gas for manufacturing and industrial purposes, under such terms and conditions as may hereafter be agreed to in writing by the Vendor and the Vendee; provided that in the judgment of the Vendor sufficient gas is available to warrant its sale for such purposes.

Vendee shall be entitled to receive industrial gas from Vendor at such times as Vendor is selling to other distributing companies who are receiving industrial gas from Vendor under substantially similar operating conditions.

## XII

It is understood that during the term of this contract Vendor will supply gas to various other communities and cities, and Vendor agrees that it will not willfully discriminate in favor of such other communities or cities or against Vendee or Vendee's domestic or industrial consumers in the matter of the apportioning of the supply of gas which Vendor has available. In times of extreme or peak demand,

Vendor will endeavor, insofar as operating conditions will [fols. 4052-4053] permit, to apportion the supply of available gas among the various communities and cities which it serves in proportion to the number of domestic consumers served in each community or city.

### XIII

All of the covenants, terms, stipulations and provisions of this contract shall extend to and be binding upon the respective successors and assigns of the parties hereto.

Notice as provided to be given hereunder shall be deemed sufficiently given and served when and if deposited in the United States mail, postage prepaid and registered, addressed to Vendor at Dallas, Texas, and to the Vendee at Dallas, Texas.

Witness the execution hereof in duplicate, each copy being hereby declared an original, on this 3rd day of Dec., 1930.

Lone Star Gas Company, by (signed) F. L. Chase,  
Vice-President.

Attest: (Signed) T. J. Uhl, Asst. Secretary. (Corporate Seal, Lone Star Gas Company, Dallas, Texas.)

Municipal Gas Company, by (signed) J. B. McCabe,  
President.

Attest: (Signed) L. W. Cole, Secretary. (Corporate Seal, 1925, Municipal Gas Company, Texas.)

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[fol. 4054]      DEFENDANT'S EXHIBIT No. 17

This Agreement, Made and entered into by and between Lone Star Gas Company, a Texas corporation hereinafter styled Vendor, and Municipal Gas Company, a Texas corporation hereinafter styled Vendee,

Witnesseth:

### I

That Vendor has agreed to sell and deliver to Vendee, and Vendee has agreed to purchase and receive from Vendor, subject to the terms, conditions, and limitations hereinafter set out, all of the natural gas necessary to meet the require-



ments of the domestic consumers supplied by Vendee in the cities of Sherman, Denison, Denton, Whitesboro and McKinney, Texas, and the suburbs thereof, for a term of seven years, commencing December 1, 1927.

## II.

The natural gas sold and purchased hereunder shall be delivered by Vendor to Vendee at the present measuring stations of the Vendor near the aforesaid cities where delivery of gas is now being made by the Vendor to the Vendee; and delivery may also be made at any measuring stations which may hereafter be established by mutual consent of the parties hereto.

## III

The natural gas to be sold by Vendor and purchased by Vendee hereunder shall be measured at the said delivery points by meters of standard type which shall be installed, operated, and maintained by the Vendor.

Gas may be delivered and measured by Vendor to Vendee at such pressures as may exist by virtue of operating conditions, but for purposes of payment therefor by Vendee to Vendor, it shall be computed on a pressure basis of eight ounces above 14.4 pounds absolute atmospheric pressure, at sixty degrees Fahrenheit temperature, and without allowance for variations in atmospheric or barometric pressure, and with an assumed barometric pressure of 14.4 pounds absolute at the points of measurement. The flowing and storage temperature of the gas shall be considered as sixty degrees Fahrenheit in all measurement computations. Variations in specific gravity of the gas shall be allowed for by determining their monthly mean or average values, and which values shall be applied to the computation of deliveries.

The Vendee shall have access to the meters of the Vendor, which measure the gas sold hereunder, at any time upon demand for the purpose of inspection, and Vendee at all reasonable times may have tests or calibrations made of Vendor's meters, at Vendee's own expense and in the presence of Vendor's representatives. In the event that Vendee shall install meters to check Vendor's meters, then Vendor shall have the same rights of access to and inspection of Vendee's check meters as Vendee enjoys with reference to Vendor's meters.

## IV

In the event that any of the meters of Vendor measuring gas delivered to the Vendee becomes inoperative or manifestly in error, then the quantity of gas delivered during the period that such meter was inoperative or manifestly in error shall be determined:

(a) By correcting for the error if such error is ascertainable, during the time of the error;

[fol. 4055] (b) By computing the deliveries from Vendee's corresponding check meter during the period of error or non-operation of Vendor's meter, if Vendee shall have installed meters of its own as check meters at the several delivery points;

(c) By estimating as nearly as may be possible the quantity of delivery from the delivery during proportionate periods under similar conditions, when such meter was registering accurately.

In the event that Vendor and Vendee shall be unable to agree upon any adjustment for any period when Vendor's meters shall have been inoperative or in error, then the matter shall be determined by three disinterested arbitrators; one to be appointed by the Vendor, one to be appointed by the Vendee, and the two so appointed to select a third. The decision of such arbitrators or any two of them shall be final, and the cost of such arbitration shall be paid one-half by Vendor and one-half by Vendee.

## V

The Vendor may make deliveries of gas to the Vendee at the maximum pressures carried in its pipe line at the point of delivery. The Vendee shall install, operate, and maintain such regulators and regulator stations as it may require to regulate the pressure of the gas after delivery thereof by Vendor to Vendee. It is expressly agreed that the Vendor shall in no event be liable for any pressure fluctuation at the said delivery points, or for the control of gas pressures after delivery of the gas to the Vendee.

The Vendor will endeavor, subject to all of the limitations hereinafter set out, to deliver gas to the Vendee at the said delivery point at a pressure of twenty pounds per square inch.

## VI

The Vendee expressly recognizes that the production and transportation of natural gas by pipe lines is subject to accidents and interruptions, and diminutions of pressure and supply. The Vendor undertakes no obligation toward Vendee other than to deliver to Vendee such gas as Vendor is able to secure from its present sources of supply and such other sources of supply to which it may extend its pipe line system. It is expressly agreed between Vendor and Vendee that Vendor shall not be liable to the Vendee for any failure to deliver gas hereunder, when such failure is occasioned by accidents to or breakage of pipe lines or machinery, diminution or failure of supply occasioned by the failure, depletion, or destruction of gas wells or fields, fires, floods, strikes, riots, explosions, act of God or the public enemy, or, and without limitation by enumeration, any other cause beyond the control of the Vendor.

## VII

It is expressly covenanted and agreed by and between the parties hereto that if either party shall fail to perform any of the covenants or obligations imposed upon it under and by virtue of this contract, then the party offended shall have the right and option to cancel and terminate this contract upon giving the offending party written notice of the violation of such covenant or obligation, and such notice having been given, if the violation complained of is not remedied within ten days, then the termination of this contract shall be deemed complete. The failure of the Vendee to make payments to the Vendor for gas purchased in accordance with the provisions of this contract, shall, among other things, be considered a failure to perform a covenant or obligation of this contract and entitling the Vendor to cancel and terminate the contract.

## VIII

It is further covenanted and agreed that if any court, Governmental regulatory body, or Governmental agency [fol. 4056] shall subject to review the price to be paid by Vendee for gas purchased from Vendor hereunder, and shall lawfully fix or establish another and different price for such gas, then if said price shall be fixed at any figure less than the price herein provided for, the Vendor shall have the

right and option to cancel and terminate this agreement by giving written notice to the Vendee; and if said price shall be fixed at any figure more than the price herein provided for, then the Vendee shall have the right and option to cancel and terminate this agreement by giving written notice to the Vendor. Such written notice when given by either party shall make the termination of this contract complete.

### IX

The price to be paid by Vendee to Vendor for the gas sold and purchased hereunder shall be at the rate of forty (40¢) cents per thousand cubic feet.

The Vendor will submit to the Vendee by the fifteenth day of each calendar month, a statement showing the amount of gas delivered to Vendee during the preceding calendar month, together with the charts from Vendor's meters, and the computation of deliveries for such period. These charts and computations shall be returned to Vendor at the time of or previously to the making of the payment for such monthly period.

On or before the twentieth day of each calendar month Vendee shall pay to the Vendor at Dallas, Texas, for all gas delivered by Vendor to Vendee during the preceding calendar month according to the gas measurements and computations hereinbefore provided for.

### X

By domestic consumers, as used in this contract, is meant all those consumers using gas in domestic service, and is defined as including the reasonable use of natural gas for heating, lighting, and cooking in private homes, boarding houses, apartment houses, hospitals, and charitable institutions; and this classification shall further extend to those using natural gas for lighting and cooking only in hotels, restaurants, bakeries, and stores, and for heating in hotels and buildings where separate rooms are dependent upon natural gas for heating purposes in grates and stoves.

### XI

It is understood that, in addition to the gas which Vendor shall deliver to Vendee hereunder to meet the requirements of Vendee's domestic consumers, the Vendor will sell and deliver to the Vendee and the Vendee will purchase and receive from the Vendor gas for manufacturing and indus-

trial purposes, under such terms and conditions as may hereafter be agreed to in writing by the Vendor and the Vendee; provided that in the judgment of the Vendor sufficient gas is available to warrant its sale for such purposes.

Vendee shall be entitled to receive industrial gas from Vendor at such times as Vendor is selling to other distributing companies who are receiving industrial gas from Vendor under substantially similar operating conditions.

## XII

It is understood that during the term of this contract Vendor will supply gas to various other communities and cities, and Vendor agrees that it will not willfully discriminate in favor of such other communities or cities or against Vendee or Vendee's domestic or industrial consumers in the matter of the apportioning of the supply of gas which Vendor has available. In times of extreme or peak demand Vendor will endeavor, in so far as operating conditions will permit, to apportion the supply of available gas among the [fols. 4057-4058] various communities and cities which it serves in proportion to the number of domestic consumers served in each community or city.

## XIII

All of the covenants, terms, stipulations, and provisions of this contract shall extend to and be binding upon the respective successors and assigns of the parties hereto.

Notices provided to be given hereunder shall be deemed sufficiently given and served when and if deposited in the United States mail, postage prepaid and registered, addressed to the Vendor at Dallas, Texas, and to the Vendee at Dallas, Texas.

Witness the execution hereof in duplicate originals on this 28th day of November, 1927.

Lone Star Gas Company, by (signed) F. L. Chase,  
Vice-President.

Attest: (Signed) T. J. Uhl, Asst. Secretary. (Corporate Seal, Lone Star Gas Company, Dallas, Texas.)

Municipal Gas Company, by (signed) J. B. McCabe,  
Vice-President.

Attest: (Signed) L. W. Cole, Asst. Secretary. (Corporate Seal, 1925, Municipal Gas Company, Texas.)



[fol. 4059] DEFENDANT'S EXHIBIT No. 18

This Agreement, Made and entered into by and between Lone Star Gas Company, a Texas corporation hereinafter styled Vendor, and Gainesville Gas & Electric Company, a Texas corporation hereinafter styled Vendee,

Witnesseth:

### I

That Vendor has agreed to sell and deliver to Vendee, and Vendee has agreed to purchase and receive from Vendor, subject to the terms, conditions and limitations hereinafter set out, all of the natural gas necessary to meet the requirements of the domestic consumers supplied by Vendee in the City of Gainesville, Texas, and the suburbs thereof, for a term of seven years, commencing August 8, 1927.

### II

The natural gas sold and purchased hereunder shall be delivered by Vendor to Vendee at the present measuring station of the Vendor near the City of Gainesville where delivery of gas is now being made by the Vendor to the Vendee.

### III

The natural gas to be sold by Vendor and purchased by Vendee hereunder shall be measured at the said delivery point by a meter or meters of standard type, which shall be installed, operated, and maintained by the Vendor.

Gas may be delivered and measured by Vendor to Vendee at such pressures as may exist by virtue of operating conditions, but for purposes of payment therefor by Vendee to Vendor, it shall be computed on a pressure basis of eight ounces above 14.4 pounds absolute atmospheric pressure, at sixty degrees Fahrenheit temperature, and without allowance for variations in atmospheric or barometric pressure, and with an assumed barometric pressure of 14.4 pounds absolute at the points of measurement. The flowing and storage temperature of the gas shall be considered as sixty degrees Fahrenheit in all measurement computations. Variations in specific gravity of the gas shall be allowed for by determining their monthly mean or average values, and which values shall be applied to the computation of deliveries.



The Vendee shall have access to the meters of the Vendor, which measure the gas sold hereunder, at any time upon demand for the purpose of inspection, and Vendee at all reasonable times may have tests or calibrations made of Vendor's meters, at Vendee's own expense and in the presence of Vendor's representatives. In the event that Vendee shall install meters to check Vendor's meters, then Vendor shall have the same rights of access to and inspection of Vendee's check meters as Vendee enjoys with reference to Vendor's meters.

#### IV

In the event that any of the meters of Vendor measuring gas delivered to the Vendee becomes inoperative or manifestly in error, then the quantity of gas delivered during the period that such meter was inoperative or manifestly in error shall be determined:

(a) By correcting for the error if such error is ascertainable, during the time of the error;

(b) By computing the deliveries from Vendee's corresponding Check meter during the period of error or non-operation of Vendor's meter, if Vendee shall have installed meters of its own as check meters at the several delivery points;

[fol. 4060] (c) By estimating as nearly as may be possible the quantity of delivery from the delivery during proportionate periods under similar conditions, when such meter was registering accurately.

In the event that Vendor and Vendee shall be unable to agree upon any adjustment for any period when Vendor's meters shall have been inoperative or in error, then the matter shall be determined by three disinterested arbitrators; one to be appointed by the Vendor, one to be appointed by the Vendee, and the two so appointed to select a third. The decision of such arbitrators or any two of them shall be final, and the cost of such arbitration shall be paid one-half by Vendor and one-half by Vendee.

#### V

The Vendor may make deliveries of gas to the Vendee at the maximum pressures carried in its pipe line at the

point of delivery. The Vendee shall install, operate, and maintain such regulators and regulator stations as it may require to regulate the pressure of the gas after delivery thereof by Vendor to Vendee. It is expressly agreed that the Vendor shall in no event be liable for any pressure fluctuation at the said delivery points, or for the control of gas pressures after delivery of the gas to the Vendee.

The Vendor will endeavor, subject to all of the limitations hereinafter set out, to deliver gas to the Vendee at the said delivery point at a pressure of twenty pounds per square inch.

## VI

The Vendee expressly recognizes that the production and transportation of natural gas by pipe lines is subject to accidents and interruptions, and diminutions of pressure and supply. The Vendor undertakes no obligation toward Vendee other than to deliver to Vendee such gas as Vendor is able to secure from its present sources of supply and such other sources of supply to which it may extend its pipe line system. It is expressly agreed between Vendor and Vendee that Vendor shall not be liable to the Vendee for any failure to deliver gas hereunder, when such failure is occasioned by accidents to or breakage of pipe lines or machinery, diminution or failure of supply occasioned by the failure, depletion, or destruction of gas wells or fields, fires, floods, strikes, riots, explosions, act of God or the public enemy, or, and without limitation by enumeration, any other cause beyond the control of the Vendor.

## VII

It is expressly covenanted and agreed by and between the parties hereto that if either party shall fail to perform any of the covenants or obligations imposed upon it under and by virtue of this contract, then the party offended shall have the right and option to cancel and terminate this contract upon giving the offending party written notice of the violation of such covenant or obligation, and such notice having been given, if the violation complained of is not remedied within ten days, then the termination of this contract shall be deemed complete. The failure of the Vendee to make payments to the Vendor for gas purchased in accordance with the provisions of this contract, shall, among other things, be considered a failure to perform a

covenant or obligation of this contract and entitling the Vendor to cancel and terminate the contract.

### VIII

It is further covenanted and agreed that if any court, Governmental regulatory body, or Governmental agency [fol. 4061] shall subject to review the price to be paid by Vendee for gas purchased from Vendor hereunder, and shall lawfully fix or establish another and different price for such gas, then if said price shall be fixed at any figure less than the price herein provided for, the Vendor shall have the right and option to cancel and terminate this agreement by giving written notice to the Vendee; and if said price shall be fixed at any figure more than the price herein provided for, then the Vendee shall have the right and option to cancel and terminate this agreement by giving written notice to the Vendor. Such written notice when given by either party shall make the termination of this contract complete.

### IX

The price to be paid by Vendee to Vendor for the gas sold and purchased hereunder shall be at the rate of forty (40¢) cents per thousand cubic feet.

The Vendor will submit to the Vendee by the fifteenth day of each calendar month, a statement showing the amount of gas delivered to Vendee during the preceding calendar month, together with the charts from Vendor's meters, and the computation of deliveries for such period. These charts and computations shall be returned to Vendor at the time of or previously to the making of the payment for such monthly period.

On or before the twentieth day of each calendar month Vendee shall pay to the Vendor at Dallas, Texas, for all gas delivered by Vendor to Vendee during the preceding calendar month according to the gas measurements and computations hereinbefore provided for.

### X

By domestic consumers, as used in this contract, is meant all those consumers using gas in domestic service, and is defined as including the reasonable use of natural gas for heating, lighting, and cooking in private homes, boarding

houses, apartment houses, hospitals and charitable institutions; and this classification shall further extend to those using natural gas for lighting and cooking only in hotels, restaurants, bakeries, and stores, and for heating in hotels and buildings where separate rooms are dependent upon natural gas for heating purposes in grates and stoves.

## XI

It is understood that, in addition to the gas which Vendor shall deliver to Vendee hereunder to meet the requirements of Vendee's domestic consumers, the Vendor will sell and deliver to the Vendee and the Vendee will purchase and receive from the Vendor gas for manufacturing and industrial purposes, under such terms and conditions as may hereafter be agreed to in writing by the Vendor and the Vendee; provided that in the judgment of the Vendor sufficient gas is available to warrant its sale for such purposes.

Vendee shall be entitled to receive industrial gas from Vendor at such times as Vendor is selling to other distributing companies who are receiving industrial gas from Vendor under substantially similar operating conditions.

## XII

It is understood that during the term of this contract Vendor will supply gas to various other communities and cities, and Vendor agrees that it will not willfully discriminate in favor of such other communities or cities or against Vendee or Vendee's domestic or industrial consumers in the matter of the apportioning of the supply of gas which Vendor has available. In times of extreme or peak demand Vendor will endeavor, in so far as operating conditions will permit, to apportion the supply of available gas among the various communities and cities which it serves in proportion to the number of domestic consumers served in each community or city.

## XIII

All of the covenants, terms, stipulations, and provisions of this contract shall extend to and be binding upon the respective successors and assigns of the parties hereto.

Notices provided to be given hereunder shall be deemed sufficiently given and served when and if deposited in the United States mail, postage prepaid and registered, ad-

dressed to the Vendor at Dallas, Texas, and to the Vendee at Gainesville, Texas.

Witness the execution hereof in duplicate originals on this 1st day of July, 1927.

Lone Star Gas Company, by (signed) F. L. Chase,  
Vice President.

Attest: (Signed) T. J. Uhl, Asst. Secretary. (Corporate Seal, Lone Star Gas Company, Dallas, Texas.)

Gainesville Gas & Electric Company, by (signed)  
Rufus C. Dawes, Vice-President.

Attest: (Signed) S. M. Hoch, Secretary. (Corporate Seal, Gainesville Gas & Electric Co., Gainesville, Texas.)

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[fol. 4064]      DEFENDANT'S EXHIBIT No. 19

This Agreement, made and entered into by and between Lone Star Gas Company, a Texas corporation hereinafter styled Vendor, and The Dallas Gas Company, a Texas corporation hereinafter styled Vendee,

Witnesseth:

I

That Vendor has agreed to sell and deliver to Vendee, and Vendee has agreed to purchase and receive from Vendor, subject to the terms, conditions, and limitations hereinafter set out, all of the natural gas necessary to meet the requirements of the domestic consumers supplied by Vendee in the city of Dallas, Texas, for a term of five years commencing June 9, 1925.

II

The natural gas sold and purchased hereunder shall be delivered by Vendor to Vendee at the following delivery points near the corporate limits of the city of Dallas:

1st. At a point on the present sixteen-inch line extending from Irving to Oak Lawn, said point to be on Lot 29, Block "C" of Forrest Park Addition to the city of Dallas.

2d. At a point on the present sixteen-inch line extending from Irving to the Union Station railway terminal, just



west of the railroad track embankment north of the Union Station.

3d. At the present measuring station on the Irving-Oak Cliff line west of Oak Cliff.

When an additional pipe line is constructed by Vendor extending from Irving, Texas, to the corporate limits of the city of Dallas, as is hereinafter provided, an additional delivery point shall be designated by agreement of Vendor and Vendee at a convenient place upon the discharge terminus of said line in proximity to the corporate limits of the city of Dallas.

### III

Natural gas to be sold by Vendor and purchased by Vendee hereunder shall be measured at the several delivery points by orifice meters of standard type, which shall be installed, operated, and maintained by the Vendor.

Gas may be delivered and measured by Vendor to Vendee at such pressures as may exist by virtue of operating conditions, but for purposes of payment therefor by Vendee to Vendor, it shall be computed on a pressure basis of eight ounces above 14.4 pounds absolute atmospheric pressure, at sixty degrees Fahrenheit temperature, and without allowance for variations in atmospheric or barometric pressure, and with an assumed barometric pressure of 14.4 pounds absolute at the points of measurement. The flowing and storage temperature of the gas shall be considered as sixty degrees Fahrenheit in all measurement computations. Variations in specific gravity of the gas shall be allowed for by determining their monthly mean or average values, and which values shall be applied to the computation of deliveries.

The Vendee shall have access to the meters of the Vendor, which measure the gas sold hereunder, at any time upon demand for the purpose of inspection, and Vendee at all reasonable times may have tests or calibrations made of Vendor's meters, at Vendee's own expense and in the presence of Vendor's representatives. In the event that Vendee shall install meters to check Vendor's meters, then Vendor shall have the same rights of access to and in-

spection of Vendee's check meters as Vendee enjoys with reference to Vendor's meters.

#### IV

In the event that any of Vendor's meters becomes inoperative or manifestly in error, then the quantity of gas delivered during the period that Vendor's meter was inoperative or manifestly in error shall be determined:

(a) By correcting for the error if such error is ascertainable, during the time of the error;

(b) By computing the deliveries from Vendee's corresponding check meter during the period of error or non-operation of Vendor's meter, if Vendee shall have installed meters of its own as check meters at the several delivery points;

(c) By estimating as nearly as may be possible the quantity of delivery from the delivery during proportionate periods under similar conditions, when such meter was registering accurately.

In the event that Vendor and Vendee shall be unable to agree upon any adjustment for any period when Vendor's meters shall have been inoperative or in error, then the matter shall be determined by three disinterested arbitrators; one to be appointed by the Vendor, one to be appointed by the Vendee, and the two so appointed to select a third. The decision of such arbitrators or any two of them shall be final, and the cost of such arbitration shall be paid one-half by Vendor and one-half by Vendee.

#### V

The Vendor may make deliveries of gas to the Vendee at the maximum pressures carried in its pipe lines at the various delivery points. The Vendee shall install, operate, and maintain such regulators and regulator stations as it may require to regulate the pressure of the gas after delivery thereof by Vendor to Vendee. It is expressly agreed that the Vendor shall in no event be liable for any pressure fluctuation at the said delivery points, or for the control of gas pressures after delivery of the gas to the Vendee.

The Vendor will endeavor, subject to all of the limitations hereinafter set out, to deliver gas at the various delivery points at an average pressure, for any given time, of twenty pounds, it being agreed that pressures in excess of thirty pounds at the Oak Cliff measuring station shall be considered as thirty pounds in determining such average pressure. Vendee recognizes that especially in times of peak demand for gas from Vendor's pipe line system, the pressures above provided for may be materially affected by the sales of gas from tap lines on Vendor's pipe lines between the town of Irving, Texas, and the City of Dallas.

## VI

The Vendor has agreed to operate, and maintain at Irving, Texas, on its Line C-2 known as the Irving-Oak Cliff line, gas compressors having a maximum capacity of 428,000 cubic feet per hour with a discharge pressure of 130 pounds. These compressors shall be operated by Vendor, upon the request of Vendee, at such times as the pressure at the present measuring station on the Irving-Oak Cliff line shall fall below twenty pounds. At any time after June 1, 1928, Vendor at Vendee's option, the option to be exercised by giving written notice, shall be required within a reasonable time to commence and complete the construction of an additional sixteen-inch pipe line extending from Irving, Texas, to the corporate limits of the city of Dallas [fol. 4066] as they then exist, at some point to be mutually agreed upon, between the northwestern part of the corporate limits of Dallas, north Oak Lawn, and the northwestern part of the corporate limits of Oak Cliff; provided, however, when and if said sixteen-inch line is completed and in operation, Vendor shall be entitled to discontinue the operation of and remove its said gas compressors at Irving, Texas.

## VII

The Vendee expressly recognizes that the production and transportation of natural gas by pipe lines is subject to accidents and interruptions, and diminutions of pressure and supply. The Vendor undertakes no obligation toward Vendee other than to deliver to Vendee such gas as Vendor is able to secure from its present sources of supply and such other sources of supply to which it may extend its

pipe line system. It is expressly agreed between Vendor and Vendee that Vendor shall not be liable to the Vendee for any failure to deliver gas hereunder, when such failure is occasioned by accidents to or breakage of pipe lines or machinery, diminution or failure of supply occasioned by the failure, depletion, or destruction of gas wells or fields, fires, floods, strikes, riots, explosions, act of God or the public enemy, or, and without limitation by enumeration; any other cause beyond the control of the Vendor.

### VIII

It is expressly covenanted and agreed by and between the parties hereto that if either party shall fail to perform any of the covenants or obligations imposed upon it under and by virtue of this contract, then the party offended shall have the right and option to cancel and terminate this contract upon giving the offending party written notice of the violation of such covenant or obligation, and such notice having been given, if the violation complained of is not remedied within ten days, then the termination of this contract shall be deemed complete. The failure of the Vendee to make payments to the Vendor for gas purchased in accordance with the provisions of this contract, shall, among other things, be considered a failure to perform a covenant or obligation of this contract and entitling the Vendor to cancel and terminate the contract.

### IX

It is further covenanted and agreed that if any court, Governmental regulatory body, or Governmental agency shall subject to review the price to be paid by Vendee for gas purchased from Vendor hereunder, and shall lawfully fix or establish another and different price for such gas, then if said price shall be fixed at any figure less than the price herein provided for, the Vendor shall have the right and option to cancel and terminate this agreement by giving written notice to the Vendee; and if said price shall be fixed at any figure more than the price herein provided for, then the Vendee shall have the right and option to cancel and terminate this agreement by giving written notice to the Vendor. Such written notice when given by either party shall make the termination of this contract complete.

## X

The price to be paid by Vendee to Vendor for the gas sold and purchased hereunder shall be at the rate of forty (40¢) cents per thousand cubic feet.

The Vendor will submit to the Vendee by the fifteenth day of each calendar month, a statement showing the amount of gas delivered to Vendee during the preceding calendar month, together with the charts from Vendor's meters, and the computation of deliveries for such period. These charts and computations shall be returned to Vendor at the time of or previously to the making of the payment for such monthly period.

On or before the twentieth day of each calendar month Vendee shall pay to the Vendor at Dallas, Texas, for all [fols. 4067-4068] gas delivered by Vendor to Vendee during the preceding calendar month according to the gas measurements and computations hereinbefore provided for.

## XI

By domestic consumers, as used in this contract, is meant all those consumers using gas in domestic service, and is defined as including the reasonable use of natural gas for heating, lighting, and cooking in private homes, boarding houses, apartment houses, hospitals, and charitable institutions; and this classification shall further extend to those using natural gas for lighting and cooking only in hotels, restaurants, bakeries, and stores, and for heating in hotels and buildings where separate rooms are dependent upon natural gas for heating purposes in grates and stoves.

## XII

It is understood that, in addition to the gas which Vendor shall deliver to Vendee hereunder to meet the requirements of Vendee's domestic consumers, the Vendor will sell and deliver to the Vendee and the Vendee will purchase and receive from the Vendor gas for manufacturing and industrial purposes, under such terms and conditions as may hereafter be agreed to in writing by the Vendor and the Vendee; provided that in the judgment of the Vendor sufficient gas is available to warrant its sale for such purposes.

Vendee shall be entitled to receive industrial gas from Vendor at such times as Vendor is selling to other dis-



tributing companies who are receiving industrial gas from Vendor under substantially similar operating conditions.

### XIII

It is understood that during the term of this contract Vendor will supply gas to various other communities and cities, and Vendor agrees that it will not willfully discriminate in favor of such other communities or cities or against Vendee or Vendee's domestic or industrial consumers in the matter of the apportioning of the supply of gas which Vendor has available. In times of extreme or peak demand Vendor will endeavor, in so far as operating conditions will permit, to apportion the supply of available gas among the various communities and cities which it serves in proportion to the number of domestic consumers served in each community or city.

### XIV

All of the covenants, terms, stipulations and provisions of this contract shall extend to and be binding upon the respective successors and assigns of the parties hereto.

Notices provided to be given hereunder shall be deemed sufficiently given and served when and if deposited in the United States mail, postage prepaid and registered, addressed to the Vendor at Dallas, Texas, and to the Vendee at Dallas, Texas.

Witness the execution hereof in duplicate originals on this 15th day of May, 1925.

Lone Star Gas Company, by (signed) R. A. Crawford, First Vice-President.

Attest: (Signed) Thomas J. Uhl, Secretary. (Corporate Seal, Lone Star Gas Company, Dallas, Texas.)

The Dallas Gas Company, by (signed) H. C. Morris, Vice-President.

Attest: (Signed) R. G. Soper, Secretary. (Seal, The Dallas Gas Company, Dallas, Texas.)

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[fols. 4069-4070] DEFENDANT'S EXHIBIT No. 20

This Agreement Made and Entered Into by and between Lone Star Gas Company, a corporation of Texas herein-

after styled Vendor, and The Dallas Gas Company, a corporation of Texas hereinafter styled Vendee,

Witnesseth:

### I

That this agreement is supplemental to and amendatory of a certain contract of date May 15, 1925, between the Vendor and the Vendee relating to the sale by Vendor and the purchase by Vendee of natural gas for domestic consumption in the city of Dallas, Texas.

### II

The Vendor has agreed to commence within 90 days from the date hereof, the construction of an eighteen (18") inch natural gas pipe line extending from a point on its present pipe line system near Joshua, Texas, to a point approximately one fourth mile south of the intersection of the Dallas-Lancaster highway and the north line of the L. Horst six hundred and forty acre survey in Dallas County, Texas. The said line shall be completed within 150 days from the date hereof.

At any two points, on said pipe line, which Vendee may designate, Vendor shall install, operate and maintain orifice meters of standard type to measure gas to be delivered at such points to the Vendee; and these said points when designated by the Vendee shall be deemed delivery points to the full extent that other delivery points are designated in the said contract of May 15, 1925.

### III

In consideration of the foregoing obligation of Vendor, Vendee hereby waives its right and releases its option to require Vendor to construct an additional pipe line from Irving, Texas, to the corporate limits of the city of Dallas, as is specifically set forth in Article VI of the said contract of May 15, 1925. Furthermore, Vendee agrees that upon the completion by Vendor of the pipe line extension provided in Article II hereof and the commencement of deliveries of gas to Vendee through the said pipe line the Vendor shall be relieved of any further obligation to commence and maintain any gas compressors at Irving, Texas, as is also provided by Article VI of the said Contract of May 15, 1925.

## IV

Except as herein expressly recited, this agreement shall not serve in any manner to change, modify or amend the said contract of May 15, 1925, between Vendor and Vendee.

Witness the execution hereof in duplicate originals on this 14th day of August, 1925.

Lone Star Gas Company, by (signed) R. A. Crawford, First Vice-President.

Attest: (Signed) D. L. Cobb, Secretary. (Corporate Seal, Lone Star Gas Company, Dallas, Texas.)

The Dallas Gas Company, by (signed) H. C. Morris, Vice-President.

Attest: (Signed) R. G. Soper, Secretary. (Seal, The Dallas Gas Company, Dallas, Texas.)

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[fols. 4071-4072] DEFENDANT'S EXHIBIT No. 21

THE STATE OF TEXAS,  
County of Dallas:

The existing contract between Lone Star Gas Company and The Dallas Gas Company for the sale by the former and purchase by the latter of natural gas for domestic consumption in the City of Dallas, which contract by its terms will terminate on June 9, 1930, by mutual agreement, is hereby renewed and extended for a period of five (5) years, beginning on June 9, 1930, and ending on June 9, 1935, upon all and singular the same terms, conditions and price specified and provided in said existing contract, and with the further provision that after June 9, 1935, such contract as hereby renewed and extended shall continue in full force and effect until the thirtieth day after either party shall give notice in writing to the other of termination.

Witness the Execution Hereof in Duplicate, each copy being hereby declared an original, on this 7th day of June, 1930.

Lone Star Gas Company, by (signed) Karl F. Griffith, Vice-President.

Attest: (Signed) T. J. Uhl, Asst. Secretary. (Corporate Seal, Lone Star Gas Company, Dallas, Texas.)

The Dallas Gas Company, by (signed) H. C. Morris, President.

Attest: (Signed) R. G. Soper, Secretary. (Seal, The Dallas Gas Company, Dallas, Texas.)

[fol. 4073] DEFENDANT'S EXHIBIT No. 22

This Agreement, made and entered into by and between Lone Star Gas Company, a Texas corporation, hereinafter styled Vendor, and Community Natural Gas Company, a corporation domiciled in Dallas, Texas, hereinafter styled Vendee,

Witnesseth:

### I

The Vendor has agreed to sell and deliver to the Vendee, and the Vendee has agreed to purchase and receive from the Vendor, subject to the terms, conditions and limitations hereinafter set out, all of the natural gas necessary to meet the requirements of the domestic consumers supplied by the distributing plants now comprising the Vendee's system, and any other distributing plants which may be added to Vendee's system by mutual agreement of the parties hereto, for a term of five (5) years, commencing January 1, 1931, and thereafter until terminated by either party giving to the other party ninety (90) days written notice of termination.

### II

The delivery point of the natural gas sold by the Vendor hereunder shall be the measuring stations of Vendor located at or near the corporate limits of the towns served by it.

### III

Natural gas to be sold by Vendor and purchased by Vendee hereunder shall be measured at the delivery points above named, by orifice meters of standard type, which shall be installed, operated and maintained by Vendor.

Gas may be delivered and measured by Vendor to Vendee at such pressures as may exist by virtue of operating condi-

tions, but for purposes of payment therefor by Vendee to Vendor, it shall be computed on a pressure basis of eight ounces above 14.4 pounds absolute pressure, at sixty degrees Fahrenheit temperature, and without allowance for variations in atmospheric or barometric pressure, and with an assumed barometric pressure of 14.4 pounds absolute at the points of measurement. The flowing and storage temperature of the gas shall be considered as sixty degrees Fahrenheit in all measurement computations. Variations in specific gravity of the gas shall be allowed for by determining their monthly mean or average values, and which values shall be applied to the computation of deliveries.

The Vendee shall have access to the meters of the Vendor which measure the gas sold hereunder, at any time upon demand, for the purpose of inspection, and Vendee at all reasonable times may have tests or calibrations made of Vendor's meters, at Vendee's own expense and in the presence of Vendor's representatives. In the event that Vendee shall install meters to check Vendor's meters, then Vendor shall have the same rights of access to and inspection of Vendee's check meters as Vendee enjoys with reference to Vendor's meters.

[fol. 4074]

#### IV

In the event that any of Vendor's meters becomes inoperative or manifestly in error, then the quantity of gas delivered during the period that Vendor's meter was inoperative or manifestly in error shall be determined:

(a) By correcting for the error, if such error is ascertainable, during the time of the error;

(b) By computing the deliveries from Vendee's corresponding check meter during the period of error or non-operation of Vendor's meter, if Vendee shall have installed meters of its own as check meters at the several delivery points;

(c) By estimating as nearly as may be possible the quantity of delivery from the delivery during proportionate periods under similar conditions, when such meter was registering accurately.

In the event that Vendor and Vendee shall be unable to agree upon any adjustment for any period when Vendor's meters shall have been inoperative or in error, then the mat-



ter shall be determined by three disinterested arbitrators, one to be appointed by the Vendor, one to be appointed by the Vendee, and the two so appointed to select a third. The decision of such arbitrators, or any two of them, shall be final, and the cost of such arbitration shall be paid one-half by Vendor and one-half by Vendee.

## V

The Vendor may make deliveries of gas to the Vendee at the maximum pressures carried in its pipe lines at the various delivery points. The Vendee shall install, operate and maintain such regulators and regulator stations as it may require to regulate the pressure of the gas after delivery thereof by Vendor to Vendee. It is expressly agreed that the Vendor shall in no event be liable for any pressure fluctuation at the said delivery points, or for the control of gas pressures after delivery of gas to the Vendee.

The Vendor will endeavor, subject to all of the limitations hereinafter set out, to deliver gas at the delivery point at a pressure of not less than twenty (20) pounds per square inch.

## VI

The Vendee expressly recognizes that the production and transportation of natural gas by pipe lines is subject to accidents and interruptions, and diminutions of pressure and supply. The Vendor undertakes no obligation toward Vendee [fol. 4075] other than to deliver to Vendee such gas as Vendor is able to secure from its present sources of supply and such other sources of supply to which it may extend its pipe line system. It is expressly agreed between Vendor and Vendee that Vendor shall not be liable to the Vendee for any failure to deliver gas hereunder, when such failure is occasioned by accidents to or breakage of pipe lines or machinery, diminution or failure of supply occasioned by the failure, depletion or destruction of gas wells or fields, fires, floods, strikes, riots, explosions, act of God or the public enemy, or, and without limitation by enumeration, any other cause beyond the control of the Vendor.

## VII

It is expressly covenanted and agreed by and between the parties hereto that if either party shall fail to perform any of the covenants or obligations imposed upon it under and

by virtue of this contract, then the party offended shall have the right and option to cancel and terminate this contract upon giving the offending party written notice of the violation of such covenant or obligation, and such notice having been given, if the violation complained of is not remedied within ten days, then the termination of this contract shall be deemed complete. The failure of the Vendee to make payments to the Vendor for gas purchased in accordance with the provisions of this contract shall, among other things, be considered a failure to perform a covenant or obligation of this contract and entitling the Vendor to cancel and terminate the contract.

### VIII

It is further covenanted and agreed that if any court, Governmental regulatory body, or Governmental agency shall subject to review the price to be paid by Vendee for gas purchased from Vendor hereunder, and shall lawfully fix or establish another and different price for such gas, then if said price shall be fixed at any figure less than the price herein provided for, the Vendor shall have the right and option to cancel and terminate this agreement by giving written notice to the Vendee; and if said price shall be fixed at any figure more than the price herein provided for, then the Vendee shall have the right and option to cancel and terminate this agreement by giving written notice to the Vendor. Such written notice when given by either party shall make the termination of this contract complete.

### IX

The price to be paid by Vendee to Vendor for the gas sold and purchased hereunder shall be at the rate of forty (40¢) cents per thousand cubic feet.

The Vendor will submit to the Vendee by the fifteenth day of each calendar month a statement showing the amount of gas delivered to Vendee during the preceding calendar month, together with the charts from Vendor's meters, and the computation of deliveries for such period. These charts and computations shall be returned to Vendor at the time of or previously to the making of the payment for such monthly period.

[fol. 4076] On or before the twentieth day of each calendar month Vendee shall pay to the Vendor at Dallas, Texas,

for all gas delivered by Vendor to Vendee during the preceding calendar month according to the gas measurements and computations hereinbefore provided for.

## X

By domestic consumers, as used in this contract, is meant all those consumers using gas in domestic service, and is defined as including the reasonable use of natural gas for heating, lighting and cooking in private homes, boarding houses, apartment houses, hospitals and charitable institutions; and this classification shall further extend to those using natural gas for lighting and cooking only in hotels, restaurants, bakeries and stores, and for heating in hotels and buildings where separate rooms are dependent upon natural gas for heating purposes in grates and stoves.

## XI

It is understood that, in addition to the gas which Vendor shall deliver to Vendee hereunder to meet the requirements of Vendee's domestic consumers, the Vendor will sell and deliver to the Vendee and the Vendee will purchase and receive from the Vendor gas for manufacturing and industrial purposes, under such terms and conditions as may hereafter be agreed to in writing by the Vendor and the Vendee; provided that in the judgment of the Vendor sufficient gas is available to warrant its sale for such purposes.

Vendee shall be entitled to receive industrial gas from Vendor at such times as Vendor is selling to other distributing companies who are receiving industrial gas from Vendor under substantially similar operating conditions.

## XII

It is understood that during the term of this contract Vendor will supply gas to various other communities and cities, and Vendor agrees that it will not willfully discriminate in favor of such other communities or cities or against Vendee or Vendee's domestic or industrial consumers in the matter of the apportioning of the supply of gas which Vendor has available. In times of extreme or peak demand, Vendor will endeavor, insofar as operating conditions will permit, to apportion the supply of available gas among the various communities and cities which it serves

in proportion to the number of domestic consumers served in each community or city.

### XIII

It is agreed and understood that this contract supersedes any and all agreements for the sale of domestic gas which have heretofore been in effect between the parties hereto.

### XIV

All of the covenants, terms, stipulations and provisions of this contract shall extend to and be binding upon the respective successors and assigns of the parties hereto.

[fols. 4077-4078] Notice as provided to be given hereunder shall be deemed sufficiently given and served when and if deposited in the United States mail, postage prepaid and registered, addressed to Vendor at Dallas, Texas, and to the Vendee at Dallas, Texas.

Witness the execution hereof, in duplicate, each copy being hereby declared an original, on this 15th day of May, 1931.

Lone Star Gas Company, by (signed) R. A. Crawford, Vice-President.

Attest: (Signed) T. J. Uhl, Asst. Secretary. (Corporate Seal, Lone Star Gas Company, Dallas, Texas.)

Community Natural Gas Company, by (signed) F. L. Chase, President.

Attest: (Signed) F. L. Richardson, Asst. Secretary. (Corporate seal, Community Natural Gas Company.)

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[fol. 4079] DEFENDANT'S EXHIBIT No. 23

This Agreement, made and entered into by and between Lone Star Gas Company, a corporation of the State of Texas, hereinafter styled Vendor, and the Waxahachie Gas Company, a corporation of the State of Arizona, licensed to do business in the State of Texas, hereinafter styled Vendee.

Witnesseth:

### I

The Vendor has agreed to sell and deliver to the Vendee, and the Vendee has agreed to purchase and receive from

the Vendor, subject to the terms, conditions and limitations hereinafter set out, all of the natural gas necessary to meet the requirements of the domestic consumers supplied by Vendee in the town of Waxahachie, Texas, and the suburbs thereof, for a term of one (1) year, commencing July 1, 1933, and thereafter until terminated by either party giving to the other party thirty (30) days written notice of termination.

## II

The gas to be sold and purchased hereunder shall be measured by a meter or meters of standard type to be installed, operated and maintained by the Vendor at the place of the delivery of said gas to the Vendee, and which place of delivery is hereby designated as being the now existing measuring station of the Vendor near the southern city limits of Waxahachie, Texas.

Gas may be delivered and measured by Vendor to Vendee at such pressures as may exist by virtue of operating conditions. It is agreed, for the purpose of this contract, that the unit of measurement of gas delivered hereunder shall be a cubic foot at an absolute pressure of eight (8) ounces per square inch above fourteen and four tenths (14.4) pounds per square inch, and at a temperature base of sixty (60) degrees Fahrenheit; and for the purpose of payment hereunder by Vendee to Vendor it is agreed that the quantities of gas delivered shall be computed from the meter records, in accordance with Boyle's Law for volume variations due to the pressure, with an agreed flowing and storage temperature of sixty (60) degrees Fahrenheit, and for an average specific gravity obtained by tests of the gas made by the balance method.

The Vendee shall have access to the meters of the Vendor, which measure the gas sold hereunder, at any time upon demand for the purpose of inspection, and Vendee at all reasonable times may have tests or calibrations made of Vendor's meters, at Vendee's own expense and in the presence of Vendor's representatives. In the event that Vendee shall install meters to check Vendor's meters, then Vendor shall have the same rights of access to and inspection of Vendee's check meters as Vendee enjoys with reference to Vendor's meters.



## III

In the event that Vendor's meter becomes inoperative or manifestly in error, then the quantity of gas delivered during the period that Vendor's meter was inoperative or manifestly in error shall be determined:

(a) By correcting for the error if such error is ascertainable, during the time of the error;

(b) By computing the deliveries from Vendee's corresponding check meter during the period of error or non-operation of Vendor's meter, if Vendee shall have installed a meter of its own as a check meter at the point of delivery.

(c) By estimating as nearly as may be possible the quantity of delivery from the delivery during proportionate periods under similar conditions, when such meter was registering accurately.

In the event that Vendor and Vendee shall be unable to agree upon any adjustment for any period when Vendor's meter shall have been inoperative or in error, then the matter shall be determined by three disinterested arbitrators, one to be appointed by the Vendor, one to be appointed by the Vendee, and the two so appointed to select a third. The decision of such arbitrators or any two of them shall be final, and the cost of such arbitration shall be paid one-half by Vendor and one-half by Vendee.

## IV

The Vendor may make deliveries of gas to the Vendee at the maximum pressures carried in its pipe lines at the above mentioned delivery point. The Vendee shall install, operate and maintain such regulators and regulator stations as it may require to regulate the pressure of the gas after delivery thereof by Vendor to Vendee. It is expressly agreed that the Vendor, for causes beyond its control as herein specified, shall not be liable for any pressure fluctuation at said delivery point and in no event shall be liable for control of gas pressures after delivery of the gas to the Vendee.

The Vendor will use reasonable diligence, subject to all of the limitations hereinafter set out, to deliver gas at the said delivery point at an average pressure of not less than twenty (20) pounds per square inch.

## V

The Vendee expressly recognizes that the production and transportation of natural gas by pipe lines is subject to accidents and interruptions, and diminutions of pressure and supply. The Vendor undertakes no obligation toward Vendee other than to deliver to Vendee such gas as Vendor is able to secure from its present sources of supply and such other sources of supply to which it may extend its pipe line system. It is expressly agreed between Vendor and Vendee that Vendor shall not be liable to the Vendee for any failure to deliver gas hereunder, when such failure is occasioned by accidents to or breakage of pipe lines or machinery, diminution or failure of supply occasioned by the [fol. 4081] failure, depletion or destruction of gas wells or fields, fires, floods, strikes, riots, explosions, act of God or the public enemy, or, and without limitation by enumeration, any other cause beyond the control of the Vendor.

## VI

It is expressly covenanted and agreed by and between the parties hereto that if either party shall fail to perform any of the covenants or obligations imposed upon it under and by virtue of this contract, then the party offended shall have the right and option to cancel and terminate this contract upon giving the offending party written notice of the violation of such covenant or obligation, and such notice having been given, if the violation complained of is not remedied within ten days, then the termination of this contract shall be deemed complete. The failure of the Vendee to make payments to the Vendor for gas purchased in accordance with the provisions of this contract shall, among other things, be considered a failure to perform a covenant or obligation of this contract and entitling the Vendor to cancel and terminate the contract.

## VII

It is further covenanted and agreed that if any court, Governmental regulatory body, or Governmental agency shall subject to review the price to be paid by Vendee for gas purchased from Vendor hereunder, and shall lawfully

fix or establish another and different price for such gas, then if said price shall be fixed at any figure less than the price herein provided for, the Vendor shall have the right and option to cancel and terminate this agreement by giving written notice to the Vendee; and if said price shall be fixed at any figure more than the price herein provided for, then the Vendee shall have the right and option to cancel and terminate this agreement by giving written notice to the Vendor. Such written notice when given by either party shall make the termination of this contract complete.

### VIII

The price to be paid by Vendee to Vendor for the gas sold and purchased hereunder shall be at the rate of forty (40¢) cents per thousand cubic feet.

In the event Vendor shall, during the term of this contract, sell domestic gas to any competitive distributing company in Waxahachie at a rate per thousand cubic feet less than the rate specified herein, then the rate herein shall be reduced to such price charged to such competitive company.

The Vendor will submit to the Vendee by the tenth day of each calendar month a statement showing the amount of gas delivered to Vendee during the preceding calendar month, together with the charts from Vendor's meters, and the computation of deliveries for such period. These charts and computations shall be returned to Vendor at the time of or previously to the making of the payment for such monthly period.

[fol. 4082] On or before the twentieth day of each calendar month Vendee shall pay to the Vendor at Dallas, Texas, for all gas delivered by Vendor to Vendee during the preceding calendar month according to the gas measurements and computations hereinbefore provided for.

### IX

By domestic consumers, as used in this contract, is meant all those consumers using gas in domestic service, and is defined as including the reasonable use of natural gas for heating, lighting and cooking in private homes, boarding houses, apartment houses, hospitals and charitable institutions; and this classification shall further extend to those using natural gas for lighting and cooking only in hotels, restaurants, bakeries and stores, and for heating in hotels

and buildings where separate rooms are dependent upon natural gas for heating purposes in grates and stoves.

## X

It is understood that, in addition to the gas which Vendor shall deliver to Vendee hereunder to meet the requirements of Vendee's domestic consumers, the Vendor will sell and deliver to the Vendee and the Vendee will purchase and receive from the Vendor gas for manufacturing and industrial purposes, under such terms and conditions as may hereafter be agreed to in writing by the Vendor and the Vendee; provided that in the judgment of the Vendor sufficient gas is available to warrant its sale for such purposes.

Vendee shall be entitled to receive industrial gas from Vendor at such times as Vendor is selling to other distributing companies who are receiving industrial gas from Vendor under substantially similar operating conditions.

## XI

It is understood that during the term of this contract Vendor will supply gas to various other communities and cities, and Vendor agrees that it will not wilfully discriminate in favor of such other communities or cities or against Vendee or Vendee's domestic or industrial consumers in the matter of the apportioning of the supply of gas which Vendor has available. In times of extreme or peak demand, Vendor will endeavor, insofar as operating conditions will permit, to apportion the supply of available gas among the various communities and cities which it serves in proportion to the number of domestic consumers served in each community or city.

## XII

All of the covenants, terms, stipulations and provisions of this contract shall extend to and be binding upon the respective successors and assigns of the parties hereto.

Notice as provided to be given hereunder shall be deemed sufficiently given and served when and if deposited in the United States mail, postage prepaid and registered, addressed [fols. 4083-4084] dressed to Vendor at Dallas, Texas, and to the Vendee at Waxahachie, Texas.

Witness the execution hereof in duplicate, each copy being hereby declared an original on this 6th day of October, 1933.

Lone Star Gas Company, by (Signed) F. L. Chase,  
Vice-President.

Attest: (Signed) by T. J. Uhl, Asst. Secretary. (Seal.)

Waxahachie Gas Company, by (Signed) F. W. White,  
President.

Attest: (Signed) by P. L. Fordyce, Secretary. (Seal.)

Approved as to Form. K. F. G., Legal Department.

[fol. 4085] DEFENDANT'S EXHIBIT No. 24

This Agreement, made and entered into by and between Lone Star Gas Company, a Texas Corporation hereinafter styled Vendor, and County Gas Company, a Texas corporation hereinafter styled Vendee.

Witnesseth:

# I

That Vendor has agreed to sell and deliver to the Vendee, and Vendee has agreed to purchase and receive from the Vendor, subject to the terms, conditions, and limitations hereinafter set out, all of the natural gas necessary to meet the requirements of the domestic consumers supplied by Vendee in the following territory:

(a) Within the corporate limits of the City of Dallas, Texas.

(b) In the suburbs of the City of Dallas and the territory adjacent thereto.

(c) In the towns of Arlington, Dalworth, Grand Prairie, and Highland Park, Texas, the suburbs of said towns, and the territory adjacent thereto.

(d) Along Vendor's gas transportation lines between the junction point of the old and new Fort Worth-Dallas Pike west of Arlington, Texas, and the western corporate limits of the City of Dallas; and also along Vendor's gas transportation lines between Irving, Texas, and the corporate limits of the City of Dallas.



The term of this agreement shall be for five years commencing June 9, 1925.

## II

The natural gas sold and purchased hereunder shall be delivered by Vendor to Vendee at the present measuring stations on Vendor's gas transportation lines near the towns of Arlington, Dalworth, and Grand Prairie, at the other measuring stations now established where gas is being supplied by Vendor to Vendee, and at such other points along the Vendor's gas transportation lines as shall hereafter be agreed upon by the parties hereto. It is contemplated that some gas will be delivered by Vendor to the Dallas Gas Company, a corporation domiciled at Dallas, Texas, for the use and benefit of Vendee, and such deliveries shall be made at the measuring stations near the City of Dallas where the Vendor will also deliver gas to the Dallas Gas Company for the use of the said company.

Each additional tap made by Vendee along Vendor's said gas transportation lines shall be deemed a delivery point within the meaning of this contract. Additional taps may be made by Vendee along Vendor's said lines, but such taps shall not be made for individual consumers, except with the written consent of Vendor, nor shall they be located at intervals of less than five hundred feet along Vendor's said lines. In no event shall taps be made by Vendee on Vendor's pipe lines until written notice is given by Vendee to Vendor giving exact location and size of tap desired. All work done in connection with such taps shall be under the supervision and to the satisfaction of the Vendor, but at the sole expense of the Vendee.

## III

The natural gas to be sold by Vendor and purchased by Vendee shall be measured, with the exceptions hereinafter provided, at the various delivery points by meters of standard type, to be installed, operated, and maintained by Vendor.

[fol. 4086] It is provided, however, that in rural sections, along Vendor's gas transportation lines where it is not feasible for Vendor to install and operate a master meter to measure the delivery of gas to a tap line of Vendee serving one or more domestic consumers, Vendor shall be entitled to take the monthly readings of Vendee's domestic

meters on said tap line as the amount of gas sold by Vendor to Vendee at such tap. In all such cases Vendee shall afford to Vendor or its representatives free access to Vendee's said domestic meters and to Vendee's records in so far as they reflect the readings of such domestic meters.

Gas may be delivered and measured by Vendor to Vendee at such pressures as may exist by virtue of operating conditions, but for purposes of payment therefor by Vendee to Vendor, it shall be computed on a pressure basis of eight ounces above 14.4 pounds absolute atmospheric pressure, at sixty degrees Fahrenheit temperature, and without allowance for variations in atmospheric or barometric pressure, and with an assumed barometric pressure of 14.4 pounds absolute at the points of measurement. The flowing and storage temperature of the gas shall be considered as sixty degrees Fahrenheit in all measurement computations. Variations in specific gravity of the gas shall be allowed for by determining their monthly mean or average values, and which values shall be applied to the computation of deliveries. In all cases where Vendor's measurements of gas delivered to Vendee are made by positive meters no temperature or specific gravity corrections shall be used in the computation of such gas deliveries.

The Vendee shall have access to the meters of the Vendor, which measure the gas sold hereunder, at any time upon demand for the purpose of inspection, and Vendee at all reasonable times may have tests or calibrations made of Vendor's meters, at Vendee's own expense and in the presence of Vendor's representatives. In the event that Vendee shall install meters to check Vendor's meters, then Vendor shall have the same rights of access to and inspection of Vendee's check meters as Vendee enjoys with reference to Vendor's meters.

#### IV

In the event that any of Vendor's meters becomes inoperative or manifestly in error, then the quantity of gas delivered during the period that Vendor's meter was inoperative or manifestly in error shall be determined:

(a) By correcting for the error if such error is ascertainable, during the time of the error;

(b) By computing the deliveries from Vendee's corresponding check meter during the period of error or non-

operation of Vendor's meter, if Vendee shall have installed meters of its own as check meters at the several delivery points;

(c) By estimating as nearly as may be possible the quantity of delivery from the delivery during proportionate periods under similar conditions, when such meter was registering accurately.

In the event that Vendor and Vendee shall be unable to agree upon any adjustment for any period when Vendor's meters shall have been inoperative or in error, then the matter shall be determined by three disinterested arbitrators; one to be appointed by the Vendor, one to be appointed by the Vendee, and the two so appointed to select a third. The decision of such arbitrators or any two of them shall be final, and the cost of such arbitration shall be paid one-half by Vendor and one-half by Vendee.

[fol. 4087]

#### V

The Vendor may make deliveries of gas to the Vendee at the maximum pressures carried in its pipe lines at the various delivery points. The Vendee shall install, operate, and maintain such regulators and regulator stations as it may require to regulate the pressure of the gas after delivery thereof by Vendor to Vendee. It is expressly agreed that the Vendor shall in no event be liable for any pressure fluctuation at the said delivery points, or for the control of gas pressures after delivery of the gas to the Vendee.

The Vendor will endeavor, subject to all of the limitations hereinafter set out, to deliver gas at the various delivery points at a pressure of not less than twenty pounds where such pressure is required by Vendee.

#### VI

The Vendee expressly recognizes that the production and transportation of natural gas by pipe lines is subject to accidents and interruptions, and diminutions of pressure and supply. The Vendor undertakes no obligation toward Vendee other than to deliver to Vendee such gas as Vendor is able to secure from its present sources of supply and such other sources of supply to which it may extend its pipe line system. It is expressly agreed between Vendor and Vendee that Vendor shall not be liable to the Vendee for any failure

2351

to deliver gas hereunder, when such failure is occasioned by accidents to or breakage of pipe lines or machinery, diminution or failure of supply occasioned by the failure, depletion, or destruction of gas wells or fields, fires, floods, strikes, riots, explosions, act of God or the public enemy, or, and without limitation by enumeration, any other cause beyond the control of the Vendor.

## VII

It is expressly covenanted and agreed by and between the parties hereto that if either party shall fail to perform any of the covenants or obligations imposed upon it under and by virtue of this contract, then the party offended shall have the right and option to cancel and terminate this contract upon giving the offending party written notice of the violation of such covenant or obligation, and such notice having been given, if the violation complained of is not remedied within ten days, then the termination of this contract shall be deemed complete. The failure of the Vendee to make payments to the Vendor for gas purchased in accordance with the provisions of this contract, shall, among other things, be considered a failure to perform a covenant or obligation of this contract and entitling the Vendor to cancel and terminate the contract.

## VIII

It is further covenanted and agreed that if any court, Governmental regulatory body, or governmental agency shall subject to review the price to be paid by Vendee for gas purchased from Vendor hereunder, and shall lawfully fix or establish another and different price for such gas, then if said price shall be fixed at any figure less than the price herein provided for, the Vendor shall have the right and option to cancel and terminate this agreement by giving written notice to the Vendee; and if said price shall be fixed at any figure more than the price herein provided for, then the Vendee shall have the right and option to cancel and terminate this agreement by giving written notice to the Vendor. Such written notice when given by either party shall make the termination of this contract complete.

## IX

The price to be paid by Vendee to Vendor for the gas sold and purchased hereunder shall be at the rate of forty (40¢) cents per thousand cubic feet.

[fol. 4088] The Vendor will submit to the Vendee by the 15th day of each calendar month a statement showing the amount of gas measured by Vendor's meters and delivered to Vendee during the preceding calendar month, together with the charts from Vendor's meters and the computation of deliveries for such period. These charts and computations shall be returned to Vendor at the time of or previously to the making of the payment for such monthly period. The Vendee by the 12th day of each calendar month shall furnish to the Vendor a statement of the deliveries made by Vendor to Vendee on rural tap lines where Vendor has not measured the gas delivered to Vendee through a master meter.

On or before the twentieth day of each calendar month Vendee shall pay to the Vendor at Dallas, Texas, for all gas delivered by Vendor to Vendee during the preceding calendar month according to the gas measurements and computations hereinbefore provided for.

## X

By domestic consumers, as used in this contract, is meant all those consumers using gas in domestic service, and is defined as including the reasonable use of natural gas for heating, lighting, and cooking in private homes, boarding houses, apartment houses, hospitals, and charitable institutions; and this classification shall further extend to those using natural gas for lighting and cooking only in hotels, restaurants, bakeries, and stores, and for heating in hotels and buildings where separate rooms are dependent upon natural gas for heating purposes in grates and stoves.

## XI

It is understood that in addition to the gas which Vendor shall deliver to Vendee hereunder to meet the requirements of Vendee's domestic consumers the Vendor will sell and deliver to the Vendee and the Vendee will purchase and receive from the Vendor gas for manufacturing and industrial purposes, under such terms and conditions as may hereafter be agreed to in writing by the Vendor and the Vendee; provided that in the judgment of the Vendor sufficient gas is available to warrant its sale for such purposes.

Vendee shall be entitled to receive industrial gas from Vendor at such times as Vendor is selling to other distribut-



ing companies who are receiving industrial gas from Vendor under substantially similar operating conditions.

## XII

It is understood that during the term of this contract Vendor will supply gas to various other communities and cities, and Vendor agrees that it will not willfully discriminate in favor of such other communities or cities or against Vendee or Vendee's domestic or industrial consumers in the matter of the apportioning of the supply of gas which Vendor has available. In times of extreme or peak demand Vendor will endeavor, in so far as operating conditions will permit, to apportion the supply of available gas among the various communities and cities which it serves in proportion to the number of domestic consumers served in each community or city.

## XIII

All of the covenants, terms, stipulations and provisions of this contract shall extend to and be binding upon the respective successors and assigns of the parties hereto.

Notices provided to be given hereunder shall be deemed sufficiently given and served when and if deposited in the United States mail, postage prepaid and registered, addressed to the Vendor at Dallas, Texas, and to the Vendee at Dallas, Texas.

[fols. 4089-4090] Witness the execution hereof in duplicate originals on this 15th day of May, 1925.

Lone Star Gas Company, by (signed) R. A. Crawford, First Vice-President.

Attest: (Signed) Thomas J. Uhl, Asst. Secretary. (Corporate Seal, Lone Star Gas Company, Dallas, Texas.)

County Gas Company, by (signed) H. C. Morris, Vice-President.

Attest: (Signed) R. G. Soper, Secretary. (Corporate Seal, County Gas Company.)

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[fol. 4091] DEFENDANT'S EXHIBIT No. 25

This Agreement, Made and entered into by and between Lone Star Gas Company, a corporation of Texas, herein-

after styled Vendor, and County Gas Company, a corporation of Texas hereinafter styled Vendee,

Witnesseth:

## I

This agreement is supplemental to and amendatory of a certain contract of date May 15, 1925, between Vendor and Vendee relating to the sale by Vendor and purchase by Vendee of natural gas for domestic consumption in the City of Dallas, and other points and places in Dallas County, Texas.

## II

The Vendor has agreed to commence within thirty days from the date hereof, the construction of an eighteen-inch natural gas pipe line beginning at a point which is the intersection of its Line "O" with an extension of Second Avenue (sometimes called Kaufman Road) from the City of Dallas, and extending in a northwesterly direction for a distance of approximately 5560 feet to the east property line of the Southern Pacific Railroad. The said pipe line shall be completed within sixty (60) days from the date hereof.

## III

By the time of the completion of the said line Vendor shall have installed and shall be ready to operate an orifice meter or meters of standard type at the junction of the said eighteen-inch tap line with the said Line "O" for the purpose of measuring gas to be delivered by Vendor to Vendee at such point, and thereafter Vendor shall operate and maintain said meter or meters for the term of this agreement; and the location of said meter or meters shall be deemed a delivery point for the sale by Vendor and purchase by Vendee of natural gas to the full extent that other delivery points are named and designated in the aforesaid contract of May 15, 1925.

## IV

In consideration of the foregoing obligation assumed by Vendor, Vendee agrees to build an eighteen-inch natural gas pipe line connecting the high pressure gas distributing system in the City of Dallas with the northwest terminus of Vendor's said eighteen-inch tap line; and Vendee further agrees to have such work completed by the time Ven-

dor is ready to make deliveries of gas through its said eighteen-inch tap line.

## V

When, as, and if the corporate limits of the City of Dallas are extended, prior to June 9, 1930, to include all or any portion of Vendor's said eighteen-inch tap line, then Vendee shall immediately purchase from Vendor such part of said line as is taken into or included within the corporate limits of the City of Dallas.

Any purchase, as above provided, of said tap line or any portion thereof by Vendee from Vendor, shall be made on the basis of the cost of the pipe line less depreciation accrued upon the books of the Vendor.

{fol. 4092]

## VI

Except as herein expressly recited, this agreement shall not serve in any manner to change, modify, or amend said contract of May 15, 1925, between Vendor and Vendee.

Witness the execution hereof in duplicate originals, on this 21 day of September, 1926.

Lone Star Gas Company, by (signed) R. A. Crawford, First Vice-President.

Attest: (Signed) D. L. Cobb, Secretary. (Corporate Seal, Lone Star Gas Company, Dallas, Texas.)

County Gas Company, by (signed) H. C. Morris, Vice-President.

Attest: (Signed) R. G. Soper, Secretary. (Corporate Seal, County Gas Company.)

(Here follows 1 photolithograph, side folio 4093)

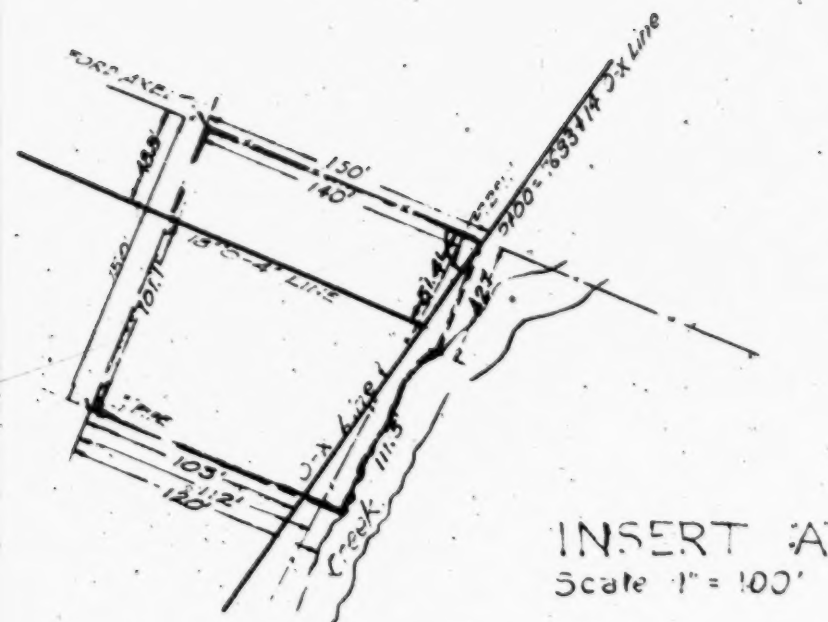
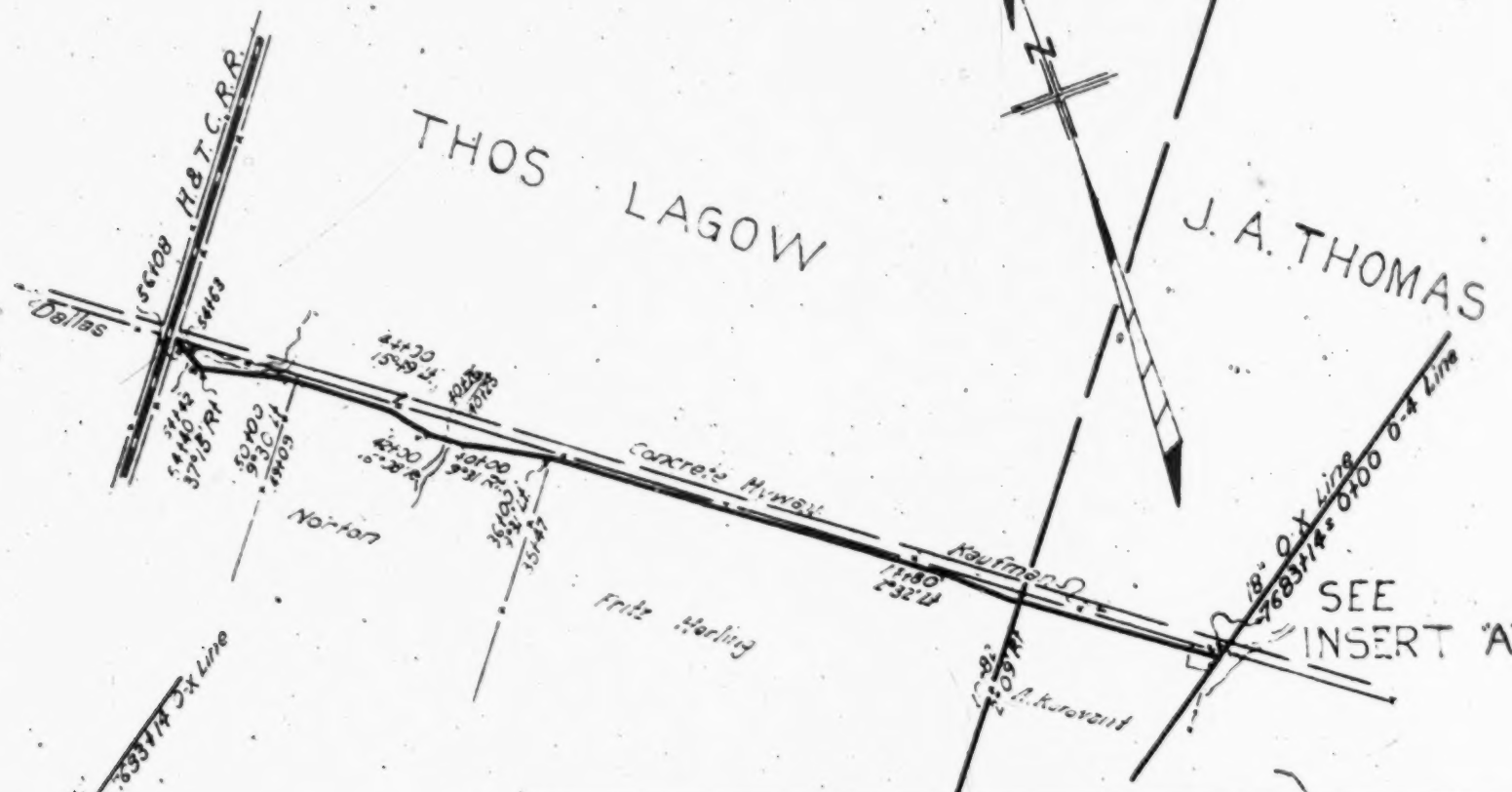
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**PAGE**

DALLAS COUNTY

THOS LAGOW

J. A. THOMAS



LONE STAR GAS CO  
 0-4 18" LINE  
 FROM  
 0+00 TO 56+08

ENGR DEPT. DALLAS TEX.

Scale 1"=1000' Sept. 7-1926

DRAWN BY CHECKED BY APPRD 192

S MCKAY

REVISED

9-20-26 L.H.M.



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[fols. 4094-4096] DEFENDANT'S EXHIBIT No. 26

THE STATE OF TEXAS,  
County of Dallas:

The existing contract between Lone Star Gas Company and County Gas Company for the sale by the former and purchase by the latter of natural gas for domestic consumption in the City of Dallas and elsewhere in the counties of Dallas and Tarrant, Texas, which contract by its terms will terminate on June 9, 1930, by mutual agreement, is hereby renewed and extended for a period of five (5) years, beginning on June 9, 1930, and ending on June 9, 1935, upon all and singular the same terms, conditions and price specified and provided in said existing contract, and with the further provision that after June 9, 1935, such contract as hereby renewed and extended shall continue in full force and effect until the thirtieth day after either party shall give notice in writing to the other of termination.

Witness the Execution Hereof in Duplicate, each copy being hereby declared an original, on this 7th day of June, 1930.

Lone Star Gas Company, by (signed) Karl F. Griffith, Vice-President.

Attest: (Signed) T. J. Uhl, Asst. Secretary. (Corporate Seal, Lone Star Gas Company, Dallas, Texas.)

County Gas Company, by (signed) H. C. Morris, President.

Attest: (Signed) R. G. Soper, Secretary. (Corporate Seal, County Gas Company.)

[fol. 4097] DEFENDANT'S EXHIBIT No. 27

This Agreement, made and entered into by and between Lone Star Gas Company, a Texas corporation, hereinafter styled Vendor, and Texas Cities Gas Company, a Texas Corporation hereinafter styled Vendee,

Witnesseth:

I

The Vendor has agreed to sell and deliver to the Vendee, and the Vendee has agreed to purchase and receive from

the Vendor, subject to the terms, conditions and limitations hereinafter set out, all of the natural gas necessary to meet the requirements of the domestic consumers supplied by the distributing plants of Vendee in Waco and Paris, Texas, and any other distributing plants which may be added to Vendee's system by mutual agreement of the parties hereto, for a term of five (5) years, commencing September 16, 1933, and thereafter until terminated by either party giving to the other party ninety (90) days written notice of termination.

## II

The delivery point of the natural gas sold by the Vendor hereunder shall be the measuring stations of Vendor located at or near the corporate limits of the towns served by it.

## III

Natural gas to be sold by Vendor and purchased by Vendee hereunder shall be measured at the delivery points above named, by orifice meters of standard type, which shall be installed, operated and maintained by Vendor.

Gas may be delivered and measured by Vendor to Vendee at such pressures as may exist by virtue of operating conditions, but for purposes of payment therefor by Vendee to Vendor, it shall be computed on a pressure basis of eight ounces above 14.4 pounds absolute pressure, at sixty degrees Fahrenheit temperature, and without allowance for variations in atmospheric or barometric pressure. The flowing and storage temperature of the gas shall be considered as sixty degrees Fahrenheit in all measurement computations. Variations in specific gravity of the gas shall be allowed for by determining their monthly mean or average values, and which values shall be applied to the computation of deliveries.

The Vendee shall have access to the meters of the Vendor which measure the gas sold hereunder, at any time upon demand, for the purpose of inspection, and Vendee at all reasonable times may have tests or calibrations made of Vendor's meters, at Vendee's own expense and in the presence of Vendor's representatives. In the event that Vendee shall install meters to check Vendor's meters, then Vendor shall have the same rights of access to and inspection of Vendee's check meters as Vendee enjoys with reference to Vendor's meters.

[fol. 4098]

## IV

In the event that any of the Vendor's meters become inoperative or manifestly in error, then the quantity of gas delivered during the period that Vendor's meter was inoperative or manifestly in error shall be determined:

(a) By correcting for the error, if such error is ascertainable, during the time of the error;

(b) By computing the deliveries from Vendee's corresponding check meter during the period of error or non-operation of Vendor's meter, if Vendee shall have installed meters of its own as check meters at the several delivery points;

(c) By estimating as nearly as may be possible the quantity of delivery from the delivery during the proportionate periods under similar conditions, when such meter was registering accurately.

In the event that Vendor and Vendee shall be unable to agree upon any adjustment for any period when Vendor's meters shall have been inoperative or in error, then the matter shall be determined by three disinterested arbitrators, one to be appointed by the Vendor, one to be appointed by the Vendee, and the two so appointed to select a third. The decision of such arbitrators, or any two of them, shall be final, and the cost of such arbitration shall be paid one-half by Vendor and one-half by Vendee.

## V

The Vendor may make deliveries of gas to the Vendee at the maximum pressures carried in its pipe lines at the various delivery points. The Vendee shall install, operate and maintain such regulators and regulator stations as it may require to regulate the pressure of the gas after delivery thereof by Vendor to Vendee. It is expressly agreed that the Vendor shall in no event be liable for any pressure fluctuation at the said delivery points, or for the control of gas pressures after delivery of gas to the Vendee.

The Vendor will endeavor, subject to all of the limitations hereinafter set out, to deliver gas at the delivery point at a pressure of not less than twenty (20) pounds per square inch.

## VI

The Vendee expressly recognizes that the production and transportation of natural gas by pipe line is subject to accidents and interruptions, and diminutions of pressure and supply. The Vendor undertakes no obligation toward Ven-[fol. 4099] dee other than to deliver to Vendee such gas as Vendor is able to secure from its present source of supply and such other sources of supply to which it may extend its pipe line system. It is expressly agreed between Vendor and Vendee that Vendor shall not be liable to the Vendee for any failure to deliver gas hereunder, when such failure is occasioned by accidents to or breakage of pipe lines or machinery, diminution or failure of supply occasioned by the failure, depletion or destruction of gas wells or fields, fires, floods, strikes, riots, explosions, act of God or the public enemy, or, and without limitation by enumeration, any other cause beyond the control of the Vendor.

## VII

It is expressly covenanted and agreed by and between the parties hereto that if either party shall fail to perform any of the covenants or obligations imposed upon it under and by virtue of this contract, then the party offended shall have the right and option to cancel and terminate this contract upon giving the offending party written notice of the violation of such covenant or obligation, and such notice having been given, if the violation complained of is not remedied within ten days, then the termination of this contract shall be deemed complete. The failure of the Vendee to make payments to the Vendor for gas purchased in accordance with the provisions of this contract shall, among other things, be considered a failure to perform a covenant or obligation of this contract and entitling the Vendor to cancel and terminate the contract.

## VIII

It is further covenanted and agreed that if any court, Governmental regulatory body, or Governmental agency shall subject to review the price to be paid by Vendee for gas purchased from Vendor hereunder, and shall lawfully fix or establish another and different price for such gas, then if said price shall be fixed at any figure less than the price herein provided for, the Vendor shall have the right



and option to cancel and terminate this agreement by giving written notice to the Vendee; and if said price shall be fixed at any figure more than the price herein provided for, then the Vendee shall have the right and option to cancel and terminate this agreement by giving written notice to the Vendor. Such written notice when given by either party shall make the termination of this contract complete.

## IX

The price to be paid by Vendee to Vendor for the gas sold and purchased hereunder shall be at the rate of forty (40¢) cents per thousand cubic feet.

The Vendor will submit to the Vendee by the fifteenth day of each calendar month a statement showing the amount of gas delivered to Vendee during the preceding calendar month, together with charts from Vendor's meters, and the computation of deliveries for such period. These charts and computations shall be returned to Vendor at the time of or previously to the making of the payment for such monthly period.

[fol. 4100] On or before the twentieth day of each calendar month Vendee shall pay to the Vendor at Dallas, Texas, for all gas delivered by Vendor to Vendee during the preceding calendar month according to the gas measurements and computations hereinbefore provided for.

## X

By domestic consumers, as used in this contract, is meant all those consumers using gas in domestic service, and is defined as including the reasonable use of natural gas for heating, lighting and cooking in private homes, boarding houses, apartment houses, hospitals and charitable institutions; and this classification shall further extend to those using natural gas for lighting and cooking only in hotels, restaurants, bakeries and stores, and for heating in hotels and buildings where separate rooms are dependent upon natural gas for heating purposes in grates and stoves.

## XI

It is understood that, in addition to the gas which Vendor shall deliver to Vendee hereunder to meet the requirements of Vendee's domestic consumers, the Vendor will sell and

deliver to the Vendee and the Vendee will purchase and receive from the Vendor gas for manufacturing and industrial purposes, under such terms and conditions as may hereafter be agreed to in writing by the Vendor and the Vendee; provided that in the judgment of the Vendor sufficient gas is available to warrant its sale for such purposes.

Vendee shall be entitled to receive industrial gas from Vendor at such times as Vendor is selling to other distributing companies who are receiving industrial gas from Vendor under substantially similar operating conditions.

## XII

It is understood that during the term of this contract Vendor will supply gas to various other communities and cities, and Vendor agrees that it will not wilfully discriminate in favor of such other communities or cities or against Vendee or Vendee's domestic or industrial consumers in the matter of the apportioning of the supply of gas which Vendor has available. In times of extreme or peak demand, Vendor will endeavor, insofar as operating conditions will permit, to apportion the supply of available gas among the various communities and cities which it serves in proportion to the number of domestic consumers served in each community or city.

## XIII

It is agreed and understood that this contract supersedes any and all agreements for the sale of domestic gas which have heretofore been in effect between the parties hereto.

## XIV

All of the covenants, terms, stipulations and provisions of this contract shall extend to and be binding upon the respective successors and assigns of the parties hereto.

[fols. 4101-4102] Notice as provided to be given hereunder shall be deemed sufficiently given and served when and if deposited in the United States mail, postage prepaid and registered, addressed to Vendor at Dallas, Texas, and to the Vendee at Dallas, Texas.

Witness the execution hereof, in duplicate, each copy being hereby declared an original, on this 15 day of Sept., 1933.

Lone Star Gas Company, by (signed) R. A. Crawford, Vice-President.

Attest: (Signed) T. J. Uhl, Asst. Secretary. (Corporate Seal, Lone Star Gas Company, Dallas, Texas.)

Texas Cities Gas Company, by (signed) L. B. Denning, President.

Attest: (Signed) D. L. Cobb, Secretary. (Corporate Seal, Texas Cities Gas Company, Texas.)

[fols. 4103-4105] DEFENDANT'S EXHIBIT No. 28

[fols. 4106-4115] - Lone Star Gas Company  
Appraisal

Cost of Reproduction New

January 1, 1933

Public Service Plant, Property and Business

Exclusive of Fort Worth Division

Volume I

E. A. Steinberger, P. McDonald Biddison, Ed. C. Connor,  
Engineers, Dallas, Texas

[fol. 4116] Summary

Physical Property Including Undis-  
tributed General Costs:

Production System Property	\$9,141,858.05
Gathering System Property	1,785,390.34
Transmission System Property	40,297,559.90
Compressing System Property	5,899,838.50
General System Property	2,929,942.78

Total	\$60,054,589.57
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Non Physical Values:

Preliminary and Organization	\$4,434,328.00
Working Capital	1,701,600.00
Going Concern Value	7,792,888.00

Total	\$13,928,816.00
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Grand Total	\$73,983,405.57
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This appraisal is based upon an inventory of the property as of January 1, 1933, to which have been applied market prices of materials of construction and prevailing labor rates as of the same date.

P. McDonald Biddison, Consulting Engineer. E. A. Steinberger, Valuation Engineer. Ed. C. Connor, Consulting Engineer.

[fol. 4117] Lone Star Gas Company

Cost of Reproduction New

January 1, 1933

Public Service Plant and Property

### Recapitulation

Account	Amount
<b>Production System Property:</b>	
Leaseholds—Developed .....	\$2,681,689.00
Leaseholds—Undeveloped .....	893,291.28
Gas Wells .....	3,908,424.15
Other Production System Structures .....	9,450.29
Other Production System Equipment .....	95,764.08
General Supervision—Allocated .....	148,596.00
Undistributed General Costs .....	1,404,643.25

<b>Total</b> .....	<b>\$9,141,858.05</b>
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<b>Gathering System Property:</b>	
Rights of Way .....	\$11,184.07
Field Measuring Station Structures .....	37,304.09
Field Measuring Station Equipment .....	130,222.96
Field Line Equipment .....	1,324,159.00
General Supervision—Allocated .....	5,288.00
Undistributed General Costs .....	277,232.22

<b>Total</b> .....	<b>\$1,785,390.34</b>
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[fol. 4118] Transmission System Property:

<b>Transmission System Measuring Station</b>	
Land including Improvements .....	\$90,898.48
<b>Transmission System Measuring Station</b>	
Leaseholds including Improvements .....	9,270.32
<b>Other Transmission System Land including</b>	
Improvements .....	26,485.54

## Defendant's Exhibit No. 28—Continued

Account	Amount
Other Transmission System Leaseholds including Improvements	\$2,267.21
Rights of Way	1,242,000.69
Transmission System Measuring Station Structures	148,572.34
Other Transmission System Structures	145,016.29
Transmission System Measuring Station Equipment	410,606.98
Transmission Line Equipment	31,894,439.40
General Supervision—Allocated	127,242.00
Undistributed General Costs	6,200,760.65

Total	\$40,297,559.90
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## Compressing System Property:

Land including Improvements	\$96,549.09
Leaseholds including Improvements	29,985.13
Structures	718,056.31
Equipment	4,065,351.72
General Supervision—Allocated	84,271.00
Undistributed General Costs	905,625.25

Total	\$5,899,838.50
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## [fol. 4119] General System Property:

General Office Land	\$44,545.00
Other General Land	49,273.87
General Office Structure	321,437.63
Other General Structures	46,789.56
General Office Furniture and Fixtures	207,601.84
Other General Furniture and Fixtures	12,059.97
General Shop Equipment	104,000.27
General Tools	131,549.72
Automotive and Construction Equipment	423,717.82
General Telephone System	370,464.12
Final Engineering Records	765,690.35
Undistributed General Costs	452,812.63

Total	\$2,929,942.78
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Grand Total	\$60,054,589.57
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## Defendant's Exhibit No. 28—Continued

[fol. 4120]

## Lone Star Gas Company

## Allocation of Undistributed General Costs to System Property

Account	Direct Cost	Per Cent of Total	Undistributed General Costs	Total
Production System Property.....	\$7,737,214.80	15.2	\$1,404,643.25	\$9,141,858.05
Gathering System Property.....	1,508,158.12	3.0	277,232.22	1,785,390.34
Transmission System Property.....	34,096,799.25	67.1	6,200,760.65	40,297,559.90
Compressing System Property.....	4,994,213.25	9.8	905,625.25	5,899,838.50
General System Property.....	2,477,130.15	4.9	452,812.63	2,929,942.78
Total.....	<u>\$50,813,515.57</u>	<u>100.0</u>	<u>\$9,241,074.00</u>	<u>\$60,054,589.57</u>

## Defendant's Exhibit No. 28—Continued

[fol. 4121]

## Recapitulation

Undistributed General Costs:	
Executive Section .....	\$503,487
Legal Section .....	490,576
Accounting Section .....	192,320
Treasury Section .....	97,509
Land Section .....	277,138
Geological Section .....	255,929
Purchasing Section .....	530,636
Other General Cost .....	201,574
Engineering Cost .....	1,127,661
Supervision Cost .....	414,493
Taxes During Construction .....	173,818
Interest During Construction .....	4,975,933
<hr/>	
Total .....	\$9,241,074
Non-Physical Values:	
Preliminary and Organization .....	\$4,474,272*
Working Capital .....	1,701,000
Going Concern Value .....	7,792,888
<hr/>	
Total .....	\$13,968,760

\*Of this amount \$39,944.00 has been included in "Production System Property" on Page 1, Volume I, and "Preliminary and Organization" reduced in like amount.

Defendant's Exhibit No. 28—Continued

[fol. 4122]

Lone Star Gas Company

Supervision Costs Allocated to Specific Property Accounts

Period	Pipe Line Construction	Compressor Sta. Construction	Telephone Line Construction	Drilling & Production
Pre-Construction.....	\$7,403.00	\$9,111.00	\$3,855.00	\$21,228.00
First Year.....	42,209.00	37,580.00	18,794.00	42,456.00
Second Year.....	42,209.00	37,580.00	18,794.00	42,456.00
Third Year.....	40,709.00	.....	18,794.00	42,456.00
Total.....	<u>\$132,530.00</u>	<u>\$84,271.00</u>	<u>\$60,237.00</u>	<u>\$148,596.00</u>

For Detailed Estimate see Pages 532 to 574 inclusive, Volume VII.

## Defendant's Exhibit No. 28—Continued

[fols. 4123-4124] Lone Star Gas Company

## Leaseholds—Developed

As per Report and Findings of Gas Reserves Prepared by  
J. H. Dunn and F. E. Kendrick and Report and Findings  
of Present Value of Gas Reserves Prepared by D. A.  
Huley

Total Leaseholds—Developed ..... \$2,681,689.00

[fols. 4125-4126] Lone Star Gas Company

## Leaseholds—Undeveloped

As per Report and Findings of Gas Reserves Prepared by  
J. H. Dunn and F. E. Kendrick and Determination of  
Present Value by E. A. Steinberger

Total Leaseholds—Undeveloped ..... \$893,291.28

[fol. 4127] Gas Wells

[fols. 4128-4390] Lone Star Gas Company

## Gas Well Equipment

## Summary

## Reproduction Cost—New

	Fee Wells	Other Owned Wells	Total
Chickasha Field.....	\$576,871.00	\$1,277.78	\$578,148.78
Duncan Field.....	94,780.29	1,648.40	96,428.69
Fox Field.....	43,910.28	4,083.14	47,993.42
Panhandle Field.....	962,222.78	3,214.30	965,437.08
Petrolia Field.....	424,398.03	67.14	424,465.17
West Texas Field.....	1,792,134.78	3,816.23	1,795,951.01
Grand Total.....	\$3,894,317.16	\$14,106.99	\$3,908,424.15

[fols. 4391-4395] Lone Star Gas Company

## Other Production System Structures

## Summary

Location	Reproduction Cost—New
Brooks Lease:	
Stephens County, Texas, Pressure Man's Cabin .....	\$83.74
S. J. Brown (McKinney) Lease:	
Stephens County, Oklahoma, Bunk House..	381.68

## Defendant's Exhibit No. 28—Continued

	Reproduction Cost—New
Cheaney Field:	
Eastland County, Texas, Cottage No. 216 . . .	\$907.21
Clarkson Warehouse Site:	
Stephens County, Oklahoma, Cottage No. 58	1,625.83
Hatcher Lease:	
Wheeler County, Texas:	
Pump House . . . . .	137.70
Water Wells . . . . .	757.52
Water Handling Equipment . . . . .	2,220.16
Dam . . . . .	416.36
Petrolia:	
Clay County, Texas, Cottage No. 42 . . . . .	1,741.53
Robberson Lease:	
Garvin County, Oklahoma, Cottage No. 80 . . .	1,178.56
<hr/>	
Total Other Production System Structures . . . . .	\$9,450.29

[fols. 4396-4416] Lone Star Gas Company

## Other Production System Equipment

## Drill, Repair and Clean Out Tools

## Recapitulation

Field	Reproduction Cost—New
West Texas . . . . .	\$23,555.94
Petrolia . . . . .	41,429.21
Oklahoma . . . . .	11,552.79
Shamrock . . . . .	19,226.14
<hr/>	
Grand Total . . . . .	\$95,764.08



## Defendant's Exhibit No. 28—Continued

[fols. 4417-4421] Lone Star Gas Company

## Gathering System Rights of Way

## Summary

Field	Reproduction Cost—New
Duncan .....	\$365.94
Fox .....	259.50
Pottsboro .....	132.60
Petrolia .....	677.02
Panhandle .....	2,778.00
West Texas .....	6,269.01
Chickasha .....	702.00
Total .....	<u>\$11,184.07</u>

\* \* \* \* \*

[fol. 4422] Lone Star Gas Company

## Field Measuring Station Structures

## Summary

	Reproduction Cost—New
Chickasha Field:	
Group No. 1 .....	\$3,473.48
Total Chickasha Field .....	<u>\$3,473.48</u>
Duncan Field:	
Group No. 1 .....	\$1,576.45
Group No. 2 .....	1,333.08
Total Duncan Field .....	<u>\$2,909.53</u>
Fox Field:	
Group No. 1 .....	\$2,999.14
Group No. 2 .....	11.40
Total Fox Field .....	<u>\$3,010.54</u>

## Defendant's Exhibit No. 28—Continued

	Reproduction Cost—New
Panhandle Field:	
Group No. 1 .....	\$6,570.56
Group No. 2 .....	2,175.40
Total Panhandle Field .....	<u>\$8,745.96</u>
Petrolia Field:	
Group No. 1 .....	\$204.70
Group No. 2 .....	97.64
Group No. 3 .....	68.01
Group No. 4 .....	146.79
Group No. 5 .....	73.62
Total Petrolia Field .....	<u>\$590.76</u>
Pottsboro Field:	
Group No. 1 .....	\$51.52
Total Pottsboro Field .....	<u>\$51.52</u>
West Texas Field:	
Group No. 1 .....	\$12,524.80
Group No. 2 .....	1,372.03
Group No. 3 .....	468.03
[fol. 4423]	
Group No. 4 .....	80.17
Group No. 5 .....	161.60
Group No. 6 .....	70.99
Group No. 7 .....	555.03
Group No. 8 .....	103.04
Group No. 9 .....	10.79
Total West Texas Field .....	<u>\$15,346.48</u>

## Defendant's Exhibit No. 28—Continued

Reproduction  
Cost—New

## Gas Purchasing Stations:

Line A-A	\$63.01
Line K-C-F	164.37
Line K-C-G	117.59
Line K-C-G	84.97
Line K-C-H-A	116.41
Line K-C-H-B	110.94
Line K-C-J-A	174.70
Line K-D	179.12
Line K-G	247.82
Line O-A	52.73
Line O-B	85.50
Line O-B-A	75.27
Line O-B-B	60.57
Line O-C	67.40
Line O-C	48.09
Line O-D	201.12
Line O-D-A	74.13
Line O-D-A-A	69.57
Line O-D-B	82.25
Line O-D-C	81.40
Line O-E-B	50.95
Line O-E-C and O-E-B	303.94
Line O-G	80.03
Line O-L-A-A	62.55
Line 26	4.21
Line 30-A	69.01
Line 51-A	63.67
Line 51-B	61.69
Line 68	50.78
Line 110	62.55
Line 153	44.03
Line 224	7.22
[fols. 4424-4470]	
Line 234	49.91
Miller Lease	67.29
Holloway Lease	41.03
Total Gas Purchasing Stations	<u>\$3,175.82</u>
Total Field Measuring Station Structures	<u>\$37,304.09</u>

## Defendant's Exhibit No. 28—Continued

[fol. 4471]

Lone Star Gas Company

## Field Measuring Station Equipment

## Summary

	Reproduction Cost—New
Chickasha Field:	
Group No. 1.....	\$10,711.24
Group No. 2.....	1,487.26
Group No. 3.....	676.70
Group No. 4.....	30.72
Total Chickasha Field.....	<u>\$12,905.92</u>
Duncan Field:	
Group No. 1.....	\$8,614.02
Group No. 2.....	227.75
Group No. 3.....	191.09
Total Duncan Field.....	<u>\$9,032.86</u>
Fox Field:	
Group No. 1.....	\$9,132.18
Group No. 2.....	2,074.95
Group No. 3.....	1,400.84
Group No. 4.....	61.36
Total Fox Field.....	<u>\$12,669.33</u>
Panhandle Field:	
Group No. 1.....	\$23,683.65
Group No. 2.....	9,879.13
Group No. 3.....	2,930.33
Total Panhandle Field.....	<u>\$36,493.11</u>

## Defendant's Exhibit No. 28—Continued

Reproduction  
Cost—New

## Petrolia Field:

Group No. 1	\$218.03
Group No. 2	404.94
Group No. 3	440.68
Group No. 4	163.43
Group No. 5	199.21
Group No. 6	245.54

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Total Petrolia Field..... \$1,671.83

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## [fol. 4472] Pottsboro Field:

Group No. 1	\$206.23
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Total Pottsboro Field..... \$206.23

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## West Texas Field:

Group No. 1	\$17,857.39
Group No. 2	4,081.57
Group No. 3	6,151.49
Group No. 4	1,426.71
Group No. 5	4,040.22
Group No. 6	465.86
Group No. 7	240.00
Group No. 8	216.29
Group No. 9	2,602.43
Group No. 10	838.45
Group No. 11	791.95
Group No. 12	220.15
Group No. 13	226.06
Group No. 14	418.75
Group No. 15	205.62
Group No. 16	339.05
Group No. 17	5,229.55
Group No. 18	2,680.96
Group No. 19	1,433.70

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Total West Texas Field..... \$49,466.20

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## Defendant's Exhibit No. 28—Continued

	Reproduction Cost—New
<b>Gas Purchasing Stations:</b>	
Line A-A	\$231.98
Line K-C-F	45.09
Line K-C-G	639.75
Line K-C-H-A	207.06
Line K-C-H-B	240.29
Line K-C-J-A	426.50
Line K-D	709.65
Line K-G	732.77
Line O-A	215.27
Line O-B	339.22
Line O-B-A	211.57
Line O-B-B	224.77
Line O-C	226.68
Line O-D	48.32
Line O-D-A	32.74
Line O-D-A-A	305.42
[fols. 4473-4526] Line O-D-B	\$290.89
Line O-D-C	30.41
Line O-E-B	23.51
Line O-E-B	252.24
Line O-E-B	232.30
Line O-E-C	38.53
Line O-E-C	336.01
Line O-G	19.75
Line O-L-A-A	17.42
Line 26	22.34
Line 30-A	14.57
Line 51-A	226.00
Line 51-B	227.60
Line 68	217.81
Line 110	298.31
Line 224	25.32
Line 234	221.48
Miller Lease	226.59
Holloway Lease	219.32
<b>Total Gas Purchasing Stations</b>	<b>\$7,777.48</b>
<b>Total Field Measuring Station Equipment</b>	<b>\$130,222.96</b>

Defendant's Exhibit No. 28—Continued  
[fols. 4527-5106] Lone Star Gas Company  
Field Line Equipment

Summary	Reproduction Cost—New
Chickasha Field .....	\$63,691.04
Duncan Field .....	100,072.50
Fox Field .....	187,115.67
Panhandle Field .....	205,731.85
Petrolia Field .....	183,951.69
Pottsboro Field .....	444.36
West Texas Field .....	583,151.89
<b>Total Field Line Equipment .....</b>	<b>\$1,324,159.00</b>

[fols. 5107-5188] Lone Star Gas Company  
Transmission System Measuring Station Land

System	Land	Improve- ments	Total
<b>City Gate Stations</b>			
A.....	\$1,811.25	\$2,122.73	\$3,933.98
B.....	1,355.00	2,730.25	4,085.25
C.....	916.25	624.58	1,540.83
E.....	4,163.00	5,480.75	9,643.75
F.....	1,573.75	1,627.62	3,201.37
G.....	1,777.23	2,861.08	4,638.31
H.....	665.00	915.30	1,580.30
J.....	4,582.63	1,479.59	6,062.22
K.....	4,191.87	4,125.19	8,317.06
L.....	6,790.35	8,265.94	15,056.29
M.....	4,177.26	4,264.21	8,441.47
O.....	10,964.80	8,684.77	19,649.57
R.....	817.50	609.49	1,426.99
Numbered.....	1,016.25	832.30	1,848.55
<b>Total City Gate Stations.....</b>	<b>\$44,802.14</b>	<b>\$44,623.80</b>	<b>\$89,425.94</b>
<b>Maine Line Sales Stations</b>			
C.....	\$.....	\$49.86	\$49.86
K.....	345.00	35.79	380.79
O.....	125.00	.....	125.00
<b>Total Main Line Sales Stations..</b>	<b>\$470.00</b>	<b>\$85.65</b>	<b>\$555.65</b>
<b>Main Line Check Meter Stations</b>			
B.....	\$287.50	\$140.59	\$428.09
E.....	50.00	.....	50.00
L.....	287.50	151.30	438.80
<b>Total Maine Line Check Meter Stations.....</b>	<b>\$625.00</b>	<b>\$291.89</b>	<b>\$916.89</b>
<b>Total.....</b>	<b>\$45,897.14</b>	<b>\$45,001.34</b>	<b>\$90,898.48</b>

## Defendant's Exhibit No. 28—Continued

[fols. 5189-5224]

Lone Star Gas Company

## Transmission System Measuring Station Leaseholds

Summary			
System	Land	Improvements	Total
<b>City Gate Stations</b>			
A.....	\$1,202.51	\$332.49	\$1,535.00
B.....	31.52	380.62	412.14
E.....	394.56	1,122.45	1,517.01
F.....	85.19	54.94	140.13
G.....	59.25	69.80	129.05
J.....	64.47	104.29	168.76
K.....	173.34	275.59	448.93
L.....	343.75	971.25	1,315.00
M.....	294.89	513.51	808.40
O.....	728.80	1,328.04	2,056.84
R.....	39.34	194.34	233.68
Numbered.....		209.96	209.96
Total City Gate Stations.....	\$3,442.62	\$5,557.28	\$8,999.90
<b>Main Line Sales Stations</b>			
F.....	\$16.87	\$.....	\$16.87
J.....		1.41	1.41
L.....		24.13	24.13
M.....	141.66		141.66
Total Main Line Sales Stations..	\$158.53	\$25.54	\$184.07
<b>Main Line Check Meter Stations</b>			
E.....	\$48.14	\$36.20	\$84.34
F.....	27.01		27.01
Total Main Line Check Meter Stations.....	\$75.15	\$36.20	\$111.35
Total.....	\$3,651.30	\$5,619.02	\$9,270.32

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## Defendant's Exhibit No. 28—Continued

Line	Location	Land	Improvements	Total
M	Junction L & M Site	\$351.90		\$351.90
M	Richland Warehouse Site	690.00	\$1,258.70	1,948.70
M	Richland Cottage Site	345.00		345.00
O	West Suspension Bridge Approach, Brazos River, Hood County	230.00		230.00
O	Joshua Warehouse Site	402.50	290.65	693.15
18	Moran Warehouse Site	175.00	788.42	963.42
18	Moran Cottage Site	100.00		100.00
18 & K-C	Cleaner Site	150.00	193.89	343.89
33	Eastland Warehouse Site	287.50	394.92	682.42
	Total Other Transmission System Land	\$14,132.40	\$12,353.14	\$26,485.54



Defendant's Exhibit No. 28—Continued

[fol. 5238-5241]

Lone Star Gas Company  
Other Transmission System Leaseholds  
Summary

Line	Location	Land	Improvements	Total
A	Line Walkers Shack, Hardeman County	\$21.25	\$	\$21.25
A	Line Walkers Shack, Wheeler County	35.00		35.00
B	Bowie Junction			
E	Gas Cleaners—Fannin County		277.88	277.88
E	Gainesville Junction Storage Lot	44.84		44.84
F	Line Walkers Shack, Denton County	47.47		47.47
H	Clarkson Warehouse Site	23.30		23.30
O & K	Brazos River Bridge Site	414.00	1,403.47	1,403.47
				414.00
	Total Other Transmission System Leaseholds	\$585.86	\$1,681.35	\$2,267.21

## Defendant's Exhibit No. 28—Continued

[fols. 5242-5254]

Lone Star Gas Company  
Transmission System Rights of Way  
Summary

System	Quantity	Unit	Amount
A.....	89,225.9	Rods	\$125,808.51
B.....	39,171.9	Rods	43,567.00
2nd B.....	31,289.9	Rods	34,800.63
C.....	12,846.9	Rods	14,288.34
E.....	94,581.3	Rods	104,717.33
F.....	42,476.7	Rods	47,242.59
G.....	72,367.7	Rods	78,729.94
H.....	53,899.8	Rods	58,879.58
J.....	14,470.3	Rods	16,093.88
K.....	163,889.1	Rods	177,724.83
L.....	129,221.9	Rods	143,548.82
M.....	76,113.4	Rods	84,653.33
O.....	170,887.1	Rods	188,191.96
R.....	27,798.3	Rods	30,197.76
Numbered.....	72,940.7	Rods	72,853.16
T. P. U.....	20,728.4	Rods	20,703.53
Grand Total Rights of Way..	1,111,909.3	Rods	\$1,242,000.69

[fol. 5255]

Lone Star Gas Company  
Transmission System Measuring Station Structures  
Summary

System	Reproduction Cost—New
City Gate Stations:	
A.....	\$8,072.49
B.....	4,519.46
C.....	3,275.95
E.....	14,574.31
F.....	3,699.73
G.....	6,495.77
H.....	2,194.30
J.....	4,931.47
K.....	12,623.34
L.....	23,820.89
M.....	9,170.18
O.....	27,173.21
R.....	1,901.92
Numbered.....	3,265.98
Total City Gate Stations.....	\$125,719.00

## Defendant's Exhibit No. 28—Continued

System	Reproduction Cost—New
Main Line Sales Stations:	
A .....	\$50.11
B .....	497.27
C .....	164.73
E .....	192.04
F .....	171.92
G .....	248.20
H .....	481.38
J .....	260.84
K .....	176.95
L .....	104.89
M .....	1,337.24
O .....	897.79
R .....	130.09
Numbered .....	442.30
T. P. U. ....	1,045.65
Total Main Line Sales Stations	<u>\$6,201.40</u>
[fols. 5256-5467] Main Line Check Meter Stations:	
A .....	\$1,173.85
B .....	830.44
C .....	2,925.91
E .....	970.40
F .....	457.55
G .....	666.69
H .....	1,545.17
J .....	269.97
K .....	3,144.40
L .....	706.61
M .....	423.70
O .....	2,463.57
R .....	58.41
Numbered .....	673.47
U. S. Government 10 in. Line .....	205.73
T. P. U. ....	136.07
Total Main Line Check Meter Sta- tions	<u>\$16,651.94</u>
Total .....	<u>\$148,572.34</u>

## Defendant's Exhibit No. 28—Continued

[fols. 5468-5541] Lone Star Gas Company

## Other Transmission System Structures

## Summary

	Reproduction Cost—New
A System .....	\$17,813.67
B System .....	14,036.43
C System .....	8,995.92
E System .....	4,369.43
G System .....	1,185.94
H System .....	54,889.73
J System .....	12,638.99
K System .....	16,454.55
L System .....	6,059.79
M System .....	8,174.19
O System .....	397.65
Total Other Transmission System Structures .....	\$145,016.29

[fol. 5542] Lone Star Gas Company

## Transmission System Measuring Station Equipment

## Summary

## City Gate Stations:

System	Reproduction Cost—New
A .....	\$20,880.55
B .....	16,276.25
C .....	8,764.83
E .....	37,280.70
F .....	14,487.65
G .....	14,346.87
H & 2nd H .....	6,089.25
J .....	21,041.96
K .....	23,869.47
L .....	55,943.06
M .....	32,817.44
O .....	63,404.32
R .....	3,130.96
Numbered .....	11,304.51
Total City Gate Stations .....	\$329,637.82

## Defendant's Exhibit No. 28—Continued

## Main Line Sales Stations:

	Reproduction Cost—New
A .....	\$709.03
B .....	2,774.40
C .....	867.47
E .....	825.39
F .....	884.32
G .....	650.90
H & 2nd H .....	946.53
J .....	1,609.55
K .....	1,540.09
L .....	724.88
M .....	9,414.38
O .....	1,761.64
R .....	1,102.50
Numbered .....	4,193.03
T. P. U. ....	5,354.72
Total Main Line Sales Stations ..	<u>\$33,358.83</u>

## [fols. 5543-5561] Main Line Check Meter Stations:

A .....	\$1,955.86
B .....	3,635.07
C .....	9,768.92
E .....	2,716.50
F .....	1,774.53
G .....	3,084.47
H & 2nd H .....	5,179.06
J .....	717.28
K .....	4,889.56
L .....	3,119.79
M .....	1,522.33
O .....	3,447.90
R .....	418.36
Numbered .....	2,213.21
U. S. Government 10 Inch Line .....	830.64
T. P. U. ....	2,336.85
Total Main Line Check Meter Sta- tions .....	<u>47,610.33</u>
Total All Systems .....	<u>\$410,606.98</u>



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## TRANSMISSION SYSTEM MEASURING STATION EQUIPMENT

"A" System

5562

ITEM	QUANTITY	UNIT	UNIT COST	AMOUNT
<b>HARROLD, WILBARGER COUNTY, TEXAS,</b>				
<b>LINE A-3</b>				
<b>METERS</b>				
Imco No. 4 500 lbs. T Serial No. 4788 with Wylie PW&T Recording Gauge Serial No. 2416 0-76 lbs. static	1	Each	329.5450	\$ 329.55
<b>REGULATORS</b>				
Fulton 1 in. HP with 5-1/2 in. diaphragm case 4 bolts screwed	1	Each	18.0550	18.06
Fulton 1-1/4 in. HP 11-3/4 in. diaphragm case 4 bolts screwed	1	Each	22.1000	22.10
<b>GAUGES</b>				
Indicating Pressure Grosby IHHR with 5 in. dial Range 0-500 lbs.	1	Each	3.7586	3.76
Foxboro IHHR with 5 in. dial Range 0-250 lbs.	1	Each	4.3114	4.31
<b>GATE VALVES Flanged</b>				
Crane IHHR ID 08&Y 2 in. 700 lb. T with RH CI 4 bolts CFBO	1	Each	17.2449	17.24
<b>KNIFE VALVES Screwed</b>				
Lunkensheimer 1/4 in. Brass RS Std.	1	Each	.6293	.63
<b>PIUG VALVES Flanged</b>				
Nordstrom 2 in. 250 lb. WP with RH CI 4 bolts CFBO	8	Each	15.4336	123.47
2 in. 250 lb. WP with RH CI 4 bolts CFBO (50% Ownership)	1	Each	15.4336	7.72
2 in. 250 lb. WP	2	Each	13.5868	27.01
<b>SAFETY VALVES Screwed</b>				
Crane 2 in. 125 lb. WP No. 12687 L & W Type	1	Each	5.6714	5.67
<b>PIPE Threaded and Coupled (Random Lengths)</b>				
	1	Lot		.76
<b>PIPE Plain End (Random Lengths)</b>				
	1	Lot		3.74

2387

Form 224-100M-7-53

## TRANSMISSION SYSTEM MEASURING STATION EQUIPMENT

"A" System

5563-5572

ITEM	QUANTITY	UNIT	UNIT COST	AMOUNT
<b>HARROLD, WILBARGER COUNTY, TEXAS,</b>				
<b>LINE A-3 (Cont'd)</b>				
<b>CUSHIONS</b>				
16 x 27 in. with baseball welded ends with 3 2 in. welded openings and 1 1/4 in. collar welded	1	Each	39.3100	\$ 39.31
<b>FITTINGS</b>				
	1	Lot		23.78
<b>WELDS</b>				
	1	Lot		18.51
Material Cost				\$ 645.62
Installation				178.09
<b>TOTAL COST INSTALLED</b>				<b>\$ 823.71</b>
<b>VERNON, WILBARGER COUNTY, TEXAS,</b>				
<b>LINE A-4</b>				
<b>METERS</b>				
Foxboro Type 207 Orifice Range 0-100 in. differential 250 lbs. static 24 hour clock Chart No. 858049 Serial No. A-8299 Company No. 1113	1	Each	143.1046	\$ 143.10
Foxboro Type 105 Differential Recorder Range 20 in. differential only 24 hour clock Chart No. 858050 Serial No. A-8286 Company No. 1113-A	1	Each	119.9348	119.93
<b>METER PIPING</b>				
Wide range screwed installation with steel needle valves	1	Set	25.1700	25.17
<b>REGULATORS</b>				
Fulton 2 in. HP with 7-1/2 in. diaphragm case No bolts Screwed	1	Each	54.9600	54.96
Fulton 4 in. HP with 7-1/2 in. diaphragm case 4 bolts with 4 x 10 in. HM CI 8 bolts CPBO	1	Each	122.5890	122.59

## TRANSMISSION SYSTEM MEASURING STATION EQUIPMENT

"A" System

5573

ITEM	QUANTITY	UNIT	UNIT COST	AMOUNT
<b>EAST WICHITA FALLS, WICHITA COUNTY, TEXAS, LINE A-12</b>				
<b>METERS</b>				
Foxboro Type 207 Orifice Range 100 in. differential 250 lbs. static with 24 hour clock Chart No. 858049 Serial No. A-69121 Company No. 8	1	Each	143.1046	143.10
Foxboro Type 105 Differential Recorder Range 20 in. differ- ential only with 24 hour clock Chart No. 858050 Serial No. 56067 Company No. 8-A	1	Each	119.9348	119.93
<b>METER PIPING</b>				
Wide range screwed installation with steel needle valves	1	Set	25.1700	25.17
<b>REGULATORS</b>				
Fulton 4 in. HP L & W Type with 7-1/2 in. diaphragm case 4 bolts CFBO	1	Each	122.5890	122.59
Fulton 6 in. HP L & W Type with 10-3/4 in. diaphragm case 8 bolts CFBO	1	Each	206.1370	206.14
<b>GAUGES</b>				
Indicating Pressure Crosby IIRH with 5 in. dial Range 0-500 lbs.	1	Each	3.7586	3.76
Foxboro IIRH with 5 in. dial Range 0-500 lbs.	1	Each	4.3114	4.31
<b>GATE VALVES Flanged</b>				
Darling 4 in. 1000 lbs. T No.102 HRS CFBO	2	Each	30.8316	61.66
Kennedy 6 in. HRS KH	1	Each	61.1558	61.16
6 in. HRS KH CFBO	1	Each	66.2800	66.28
Westcott 8 in. 500 lbs. WP HRS CFBO	4	Each	73.7908	295.16
<b>GATE VALVES Screwed</b>				
Lunkensheimer 1/4 in. 150 lbs. WP RS Brass	1	Each	1.0941	1.09
<b>PLUG VALVES Flanged</b>				
Nordstrom 4 in. 250 lbs. WP CFBO	1	Each	45.8848	45.88
<b>PIPE Plain End (Random Lengths)</b>				
	1	Lot		43.57

## TRANSMISSION SYSTEM MEASURING STATION EQUIPMENT

"A" System

5574-5582

ITEM	QUANTITY	UNIT	UNIT COST	AMOUNT
<b>EAST WICHITA FALLS, WICHITA COUNTY, TEXAS, LINE A-12 (Cont'd)</b>				
<b>CUSHIONS</b>				
18 in. x 9 ft. 10-3/4 in. with baseball welded ends 1 6 in., 1 4 in., and 1 1/2 in. collar welds	1	Each	68.5700	\$ 68.57
<b>HEADERS</b>				
10 in. x 4 ft. 10 in. baseball welded end with 1 4 in., 1 6 in., and 1 10 in. openings	1	Each	41.3900	41.39
12 in. x 4 ft. 10 in. baseball welded ends with 2 8 in., 1 6 in., and 1 4 in. openings	1	Each	49.6200	49.62
12 in. x 7 ft. 10 in., one end flat welded, other end with orange peel welded bull plug with 1 12 in. collar and 2 8 in. and 1 10 in. openings	1	Each	84.4300	84.43
<b>FITTINGS</b>	1	Lot		124.07
<b>WELDS</b>	1	Lot		87.78
<b>Material Cost</b>				\$ 1,655.66
<b>Installation</b>				445.28
<b>TOTAL COST INSTALLED</b>				\$ 2,100.94
<b>SURCHERRY TAP, NORTH WICHITA FALLS, WICHITA COUNTY, TEXAS LINE A-13</b>				
<b>METERS</b>				
Foxboro Type C Orifice Range 100 in. differential 50 lbs. static with 24 hour clock Chart No. 85828 Serial No. 39169 Company No. 93	1	Each	141.2682	\$ 141.27
<b>METER PIPING</b>				
Single screwed installation with steel needle valves throughout	1	Set	23.1700	23.17



2390

Form 954 10-54 7-43

## TRANSMISSION SYSTEM MEASURING STATION EQUIPMENT

"B" System

5583

ITEM	QUANTITY	UNIT	UNIT COST	AMOUNT
<b>BELLEVUE, CLAY COUNTY, TEXAS, LINE B-1 (Cont'd)</b>				
<b>FITTINGS</b>	1	Lot		\$ 23.54
<b>WELDS</b>	1	Lot		24.72
Material Cost				\$ 813.61
Installation				224.05
<b>TOTAL COST INSTALLED</b>				\$ 1,037.66
<b>BOWIE, MONTAGUE COUNTY, TEXAS, LINE B-2</b>				
<b>METERS</b>				
Foxboro Type C Orifice range 100 in. differential 100 lbs. static 24 hour clock Chart No. 89870 Serial No. 18801 Company No. 1245	1	Each	129.6258	\$ 129.63
Foxboro Type T differential recorder range 20 in. differential only with 24 hour clock Chart No. 89863 Serial No. 18804 Company No. 1245-A	1	Each	106.1254	106.13
<b>METER PIPING</b>				
Wide range screwed installation with steel needle valves	1	Set	25.1700	25.17
<b>REGULATORS Flanged</b>				
Fulton 2 in. HP with 7-1/2 in. diaphragm case no bolts	2	Each	67.5040	135.01
<b>GAUGES</b>				
Indicating Pressure Foxboro IBBR 5-1/2 in. dial Range 0 - 250 lbs.	1	Each	4.3114	4.31
Crosby IBBR 5-1/2 in. dial Range 0 - 500 lbs.	1	Each	3.7586	3.76
<b>THERMOMETER</b>				
Tagliabue Recording range 0 - 150 degrees F Chart Nos. 150-0-9 IBBR 9-3/4 in. diameter 7 day clock with 1 5 ft. 1 14 ft. 1 15 ft. 1/4 in. OD copper tube				

2391

## TRANSMISSION SYSTEM MEASURING STATION EQUIPMENT

5584

"B" System

ITEM	QUANTITY	UNIT	UNIT COST	AMOUNT
<b>BOWIE, MONTAGUE COUNTY, TEXAS, LINE B-2 (Cont'd)</b>				
<b>THERMOMETER (Cont'd)</b> Flexible with 8 in. of 3/8 in. OD outlet cooper mesh on each end of tubes	3	Each	83.2175	\$ 249.65
<b>GATE VALVES Flanged</b> Walworth IHFM DD OS&Y 2 in. 700 lbs. T with 2 x 6- 1/2 in. EH CI 4 bolts CFBO	4	Each	17.2655	69.06
4 in. 700 lbs. T with 4 x 10 in. EH CI 8 bolts CFBO	5	Each	32.2646	161.32
<b>HECKLE VALVES Screwed</b> Lunkensheimer 1/4 in. brass Std. RS	6	Each	.6293	3.78
<b>PIUS VALVES</b> Nordstrom 2 in. 250 lbs. WP with CI Std. CFBO	2	Each	15.4336	30.87
<b>SAFETY VALVES Screwed</b> Crane 4 in. 125 lbs. WP L&W type No. 12635	1	Each	15.7096	15.71
<b>PIPE Threaded and Coupled (Random Lengths)</b>	1	Lot		14.50
<b>PIPE Plain End (Random Lengths)</b>	1	Lot		2.62
<b>CUSHIONS</b> With baseball welded ends 12 x 72 in. with 4 2 in. welded openings and 1 1/4 in. collar welded	1	Each	38.0200	38.02
12 x 72 in. with 3 4 in. and 1 2 in. welded openings	1	Each	42.3800	42.38
3 x 8-1/4 in. with 2 2 in. welded openings and 1 1/4 in. and 1 1-1/4 in. collar welded on	2	Each	9.7300	19.46
3 x 8-1/4 in. with 2 2 in. welded openings and 2 1/4 in. and 1 1-1/4 in. collar welded on	2	Each	10.0300	20.06
<b>FITTINGS</b>	1	Lot		48.16

2392

FORM 504 504 0-52

## TRANSMISSION SYSTEM MEASURING STATION EQUIPMENT

"B" System

5585-5586

ITEM	QUANTITY	UNIT	UNIT COST	AMOUNT
<b>BOWIE, MONTAGUE COUNTY, TEXAS, LINE B-2 (Cont'd)</b>				
<b>WELDS</b>	1	Lot		\$ 27.18
Material Cost				\$ 1,146.78
Installation				317.96
<b>TOTAL COST INSTALLED</b>				<b>\$ 1,464.74</b>
<b>SUNSET, MONTAGUE COUNTY, TEXAS, LINE B-3</b>				
<b>METERS</b>				
Emco No. 4 500 lbs. T Serial No. 5374 with Wylie PV&T re- cording gauge Serial No. 2756 0-76 lbs. static with 7 day Foxboro clock	1	Each	471.9596	\$ 471.96
<b>REGULATORS</b>				
Fulton 1 in. HP with 5-1/2 in. diaphragm case 4 bolts screwed	1	Each	18.0550	18.06
Fulton 1-1/4 in. HP with 7 in. diaphragm case 4 bolts screwed	1	Each	22.1000	22.10
<b>GAUGES</b>				
Indicating Pressure Foxboro IBER 5 in. dial Range 0-250 lbs.	1	Each	4.3114	4.31
Crosby IBER 5 in. dial Range 0-500 lbs.	1	Each	3.7586	3.76
<b>GATE VALVES Flanged</b>				
Walworth IBERM DD OS&Y 2 in. 125 lbs. WP with 2 x 6-1/2 in. CI Std. CFBO	4	Each	10.1093	40.44
2 in. 700 lbs. T with 2 x 6- 1/2 in. EH CI CFBO	5	Each	17.2655	86.33
2 in. 700 lbs. T with 2 x 6- 1/2 in. EH CI CFBO (50% Ownership)	1	Each	17.2655	8.63
2 in. 700 lbs. T	2	Each	15.3387	30.68
<b>NEEDLE VALVES Screwed</b>				
1/4 in. brass Std. NS	2	Each	.4838	.97

## TRANSMISSION SYSTEM MEASURING STATION EQUIPMENT

"B" System

5587

ITEM	QUANTITY	UNIT	UNIT COST	AMOUNT
<b>ALVORD, WINE COUNTY, TEXAS, LINE B-4 (Cont'd)</b>				
<b>GATE VALVES Flanged</b>				
Walworth IHFM DD CS&Y				
2 in. 125 lbs. WP 2 x 6-1/2	3	Each	10.1093	\$ 30.33
1 in. CI Std. CFBO				
2 in. 700 lbs. T with 2 x 6-1/2 in. HH CI CFBO	8	Each	17.2655	138.12
2 in. 700 lbs. T with 2 x 6-1/2 in. HH CI CFBO (50% Ownership)	1	Each	17.2655	8.63
<b>SAFETY VALVES Screwed</b>				
Grane 2 in. 125 lbs. WP LAW Type	1	Each	5.6714	5.67
<b>PIPE Threaded and Coupled (Random Lengths)</b>	1	Lot		1.67
<b>PIPE Plain End (Random Lengths)</b>	1	Lot		2.75
<b>CUSHIONS</b>				
12 x 60 in. with baseball ends, with one 2 in. welded opening	1	Each	32.2400	32.24
<b>FITTINGS</b>	1	Lot		31.26
<b>WELDS</b>	1	Lot		24.72
Material Cost				\$ 795.58
Installation				218.92
<b>TOTAL COST INSTALLED</b>				<b>\$ 1,014.50</b>
<b>MAGNOLIA PIPE LINE COMPANY, ALVORD, TEXAS, LINE B-4</b>				
<b>REGULATORS</b>				
Hercules 1 in. HP Screwed	1	Each	8.3400	\$ 8.34
Enco 1 in. Type B Service Screwed	1	Each	4.8600	4.86
<b>GATE VALVES Screwed</b>				
Darling 2 in. No. 101 IHFM DD NRS	1	Each	13.1367	13.14
<b>PIPE Threaded and Coupled (Random Lengths)</b>	1	Lot		.42

## TRANSMISSION SYSTEM MEASURING STATION EQUIPMENT

"B" System

5588

ITEM	QUANTITY	UNIT	UNIT COST	AMOUNT
<u>MAGNOLIA PIPE LINE COMPANY, ALVORD</u> <u>TEXAS, LINE B-4 (Cont'd)</u>				
<b>FITTINGS</b>	1	Lot		\$ 2.32
Total Material				\$ 29.08
Installation				8.26
<b>TOTAL COST INSTALLED</b>				\$ 37.34
<u>DECATUR, WISE COUNTY, TEXAS,</u> <u>LINE B-5</u>				
<b>METERS</b>				
Foxboro Type C Orifice Meter, range 100 in. differential 100 lbs. static 24 hour clock Chart No. 5870 Serial No. 59877 Company No. 1242	1	Each	129.6258	\$ 129.63
Foxboro Type T Differential Re- corder range 20 in. differen- tial only with 24 hour clock Chart No. 89863 Serial No. 58097 Company No. 1242-A	1	Each	106.1254	106.13
<b>METER PIPING</b>				
Wide range screwed installation with Lunkenheimer brass needle valves	1	Set	16.8500	16.85
<b>REGULATORS</b>				
Fulton 1-1/2 in. HP with 5-1/2 in. diaphragm case 4 bolts screwed	1	Each	26.2700	26.27
Emco 2 in. HP Balanced Valve with 11 in. diaphragm case 6 bolts Serial No. 1371	1	Each	87.7250	87.73
<b>GAUGES</b>				
Indicating Pressure Foxboro IBHR 5 in. dial Range 0-250 lbs.	1	Each	4.3114	4.31
Foxboro IBHR 5 in. dial Range 0-500 lbs.	1	Each	4.3114	4.31
<b>GATE VALVES Flanged</b>				
Walsworth IBHM ID OS&Y 2 in. 700 lbs. T with 2 x 6- 1/2 in. EH CI CFBO	3	Each	17.2655	51.80



## TRANSMISSION SYSTEM MEASURING STATION EQUIPMENT

"B" System

5589-5590

ITEM	QUANTITY	UNIT	UNIT COST	AMOUNT
DECATUR, WISE COUNTY, TEXAS, LINE B-5 (Cont'd)				
GATE VALVES Flanged (Cont'd)				
Walworth IBBM DD OS&Y				
2 in. 700 lbs. T	1	Each	15.3387	\$ 15.34
4 in. 700 lbs. T with 4 x				
10 in. KH CI CFBO	5	Each	32.2646	161.32
GLOBE VALVES Screwed				
Crane 1/4 in. brass, Std. RS	2	Each	.4067	.81
PLUG VALVES				
Nordstrom				
2 in. 250 lbs. WP with 2 x				
6-1/2 in. KH CI CFBO	2	Each	15.4336	30.87
SAFETY VALVE Screwed				
Crane 4 in. 125 lbs. WP L&W				
Type	1	Each	15.7096	15.71
PIPE Threaded and Coupled				
(Random Lengths)	1	Lot		13.50
PIPE Plain End (Random Lengths)	1	Lot		2.55
CUSHIONS				
12 x 72 in. baseball welded				
ends with 4 2 in. welded				
openings and 1 1/4 in.				
collar welded	1	Each	38.0200	38.02
12 x 72 in. with baseball				
welded ends with 3 4 in.				
and 1 2 in. welded openings	1	Each	42.3800	42.38
FITTINGS	1	Lot		57.24
WELDS	1	Lot		23.75
Total Material				\$ 828.52
Installation				228.55
TOTAL COST INSTALLED				\$ 1,057.07

## TRANSMISSION SYSTEM MEASURING STATION EQUIPMENT

"B" System

5591

ITEM	QUANTITY	UNIT	UNIT COST	AMOUNT
<u>RHOMB, WISE COUNTY, TEXAS,</u> <u>LINE B-6 (Cont'd)</u>				
<b>FITTINGS</b>	1	Lot		\$ 19.28
<b>WELDS</b>	1	Lot		24.72
Material Cost				\$ 849.01
Installation				234.10
<b>TOTAL COST INSTALLED</b>				<b>\$ 1,083.11</b>
<u>NORTH FT. WORTH, TARRANT COUNTY,</u> <u>TEXAS, LINE B-7</u>				
<u>INTERMEDIATE PRESSURE REGULATOR</u> <u>HOUSE</u>				
<b>REGULATORS</b>				
Fulton 1 in. HP with 11-3/4 in. diaphragm case 4 bolts screwed	1	Each	18.0550	\$ 18.06
Fulton 12 in. HP with 11 in. diaphragm case 12 bolts flanged	1	Each	614.5130	614.51
<b>GAUGES</b>				
Indicating Pressure Ashcroft IBER with 7 in. dial Range 0-400 lbs.	1	Each	7.9121	7.91
<b>GATE VALVES Flanged</b>				
Atwood IBEM DD NRS 12 in. Steel Stem-No. 4 P	3	Each	165.1806	495.54
Darling IBEM DD NRS 4 in. No. 72 with 4 x 10 in. EH CI CFBO	1	Each	27.8978	27.90
<b>GLOBE VALVES Screwed</b>				
Jenkins 3/8 in. brass Std. RS	3	Each	.9044	2.71
Lunkenheimer 3/8 in. brass Std. RS	1	Each	.8043	.80
<b>SAFETY VALVES Screwed</b>				
Atwood 4 in. L&W Type	1	Each	15.7096	15.71
<b>PIPE Threaded and Coupled</b> (Random Lengths)	1	Lot		2.41

2397

Form 354 10-55 7-54

## TRANSMISSION SYSTEM MEASURING STATION EQUIPMENT

"B" System

3592

ITEM	QUANTITY	UNIT	UNIT COST	AMOUNT
<u>NORTH FT. WORTH; TARRANT COUNTY,</u> <u>TEXAS. LINE B-7 (Cont'd)</u>				
<u>INTERMEDIATE PRESSURE REGULATOR</u> <u>HOUSE (Cont'd)</u>				
FITTINGS	1	Lot		\$ 252.84
Material Cost				\$ 1,438.39
Installation				408.51
TOTAL COST INSTALLED				\$ 1,846.90
LONE STAR GAS CO. OWNERSHIP 50%				\$ 923.45
<u>HIGH PRESSURE REGULATOR HOUSE</u>				
REGULATORS				
Esco 10 in. HP with 9-1/2 in. diaphragm case 6 belts 600 lbs. inlet pressure 80 lbs. outlet pressure No. 2814 flanged	1	Each	459.4250	\$ 459.43
GAUGES				
Indicating Pressure Foxbore IBER with 5 in. dial Range 0-250 lbs.	1	Each	4.3114	4.31
GATE VALVES Flanged				
Darling IBER DD MRS. 6 in. 700 lbs. T with 6 x 12- 1/2 in. EH CI LE 12 bolts CFBO	1	Each	43.8687	43.87
10 in. 700 lbs. T with 10 x 17-1/2 in. EH CI LE 16 bolts CFBO	2	Each	107.7687	215.54
GLOBE VALVES Screwed				
Crane 1/4 in. 125 lbs. WP brass	1	Each	.4067	.41
Lunkenheimer 1/4 in. brass Std. RS	1	Each	.6643	.66
NEEDLE VALVE				
Metric 1/4 in.	1	Each	1.2588	1.26
PIPE Threaded and Coupled (Random Lengths)				
	1	Lot		29.30

## TRANSMISSION SYSTEM MEASURING STATION EQUIPMENT

"B" System

5593

ITEM	QUANTITY	UNIT	UNIT COST	AMOUNT
NORTH FT. WORTH, TARRANT COUNTY, TEXAS, LINE B-7 (Cont'd)				
<u>HIGH PRESSURE REGULATOR HOUSE</u>				
<u>FITTINGS</u>	1	Lot		\$ 129.75
Material Cost				\$ 884.53
Installation				251.21
TOTAL COST INSTALLED				\$ 1,135.74
LOME STAR GAS CO. OWNERSHIP 50%				\$ 567.87
BY PASS INSTALLATION FROM HIGH PRESSURE REGULATOR HOUSE TO IN- TERMEDIATE PRESSURE REGULATOR HOUSE				
<u>REGULATORS</u>				
Fulton 4 in. HP with 7-1/2 in. diaphragm case 4 bolts with 4 x 10 in. EH CI 8 bolts CFBO	1	Each	122.5890	\$ 122.59
<u>GAUGES</u>				
Indicating Pressure Foxboro IBER with 5 in. dial Range 0-500 lbs.	1	Each	4.3114	4.31
<u>GATE VALVES Screwed</u>				
Darling IBER DD NRS	1	Each	23.1346	23.13
4 in. 700 lbs. T No. 71	1	Each	26.2319	26.23
4 in. 1000 lbs. T No. 101				
<u>GLOBE VALVES Screwed</u>				
Launkheimer	1	Each	.6643	.66
1/4 in. 200 lbs. WP RS				
<u>PLUG VALVES Flanged</u>				
Nordstrom 2 in. 250 lbs. WP with 2 x 6-1/2 in. EH CI 8 bolts CFBO	1	Each	15.4336	15.43
<u>PIPE Threaded and Coupled (Random Lengths)</u>				
	1	Lot		2.59

## TRANSMISSION SYSTEM MEASURING STATION EQUIPMENT

"B" System

5594

LM B	ITEM	QUANTITY	UNIT	UNIT COST	AMOUNT
	<u>NORTH FT. WORTH, TARRANT COUNTY, TEXAS, LINE B-7 (Cont'd)</u>				
	<u>BY-PASS INSTALLATION (Cont'd)</u>				
	PIPE Plain End (Random Lengths)	1	Lot		\$ 12.96
	FITTINGS	1	Lot		3.62
	WELDS	1	Lot		21.35
	Material Cost				\$ 232.87
	Installation				60.07
	TOTAL COST INSTALLED				\$ 292.94
	LOVE STAR GAS CO. OWNERSHIP 50%				\$ 146.47
	<u>REGULATOR HOUSE</u>				
	<u>REGULATORS</u>				
	Fulton 10 in. HP with 13 in. diaphragm case 9 bolts Serial No. A-10923 with 10 x 17-1/2 in. EH CI LE 16 bolts CFBO	1	Each	445.8270	\$ 445.83
	<u>GAUGES</u>				
	Indicating Pressure U.S. Company brass with 2-1/2 in. dial Range 0-200 lbs.	1	Each	1.6548	1.65
	<u>GATE VALVES Flanged</u>				
	Cross 10 in. 175 lbs. WP Wedge Steel Stem OS&Y with 10 x 17- 1/2 in. EH CI 16 bolts CFBO	2	Each	105.9510	211.90
	Barling 12 in. 700 lbs. T IB IHH No. 72 with 10 x 17-1/2 in. EH CI LE 16 bolts CFBO HHH	1	Each	145.1893	145.19
	<u>GLOBE VALVES Screwed</u>				
	Walworth 1/4 in. Brass Std. RS	1	Each	.4067	.41
	<u>PLUG VALVES Screwed</u>				
	1 in. CI	1	Each	4.9850	4.99

2400

## TRANSMISSION SYSTEM MEASURING STATION EQUIPMENT

5595

"B" System

ITEM	QUANTITY	UNIT	UNIT COST	AMOUNT
<b>NORTH FT. WORTH, TARRANT COUNTY, TEXAS, LINE B-7 (Cont'd)</b>				
<b><u>REGULATOR HOUSE</u> (Cont'd)</b>				
PIPE Threaded and Coupled (Random Lengths)	1	Lot		\$ 17.53
PIPE Plain End (Random Lengths)	1	Lot		7.00
FITTINGS	1	Lot		63.02
WELDS	1	Lot		52.07
Material Cost				\$ 949.59
Installation				254.89
TOTAL COST INSTALLED				\$ 1,204.48
LONE STAR GAS CO. OWNERSHIP 50%				\$ 602.24
<b><u>REGULATOR HOUSE</u></b>				
<b>REGULATORS</b>				
Emco 12 in. HP with 11 in. diaphragm case 6 bolts No. 3520 with 12 x 20-1/2 in. EH CI 16 bolts CFBO	1	Each	706.1604	\$ 706.16
<b>GATE VALVES Flanged NRS</b>				
Westcott 12 in. 200 lbs. WP ID IHM with 12 x 20-1/2 in. EH CI 16 bolts CFBO	3	Each	82.6091	247.83
PIPE Threaded and Coupled (Random Lengths)	1	Lot		43.83
FITTINGS	1	Lot		46.82
WELDS	1	Lot		53.89
Material Cost				\$ 1,098.53
Installation				296.68
TOTAL COST INSTALLED				\$ 1,395.21
LONE STAR GAS CO. OWNERSHIP 50%				\$ 697.61



## TRANSMISSION SYSTEM MEASURING STATION EQUIPMENT

"B" System

5596

ITEM	QUANTITY	UNIT	UNIT COST	AMOUNT
<u>NORTH FT. WORTH, TARRANT COUNTY,</u> <u>TEXAS, LINE B-7 (Cont'd)</u>				
<u>PITOT TUBE HOUSE</u>				
<u>METERS</u>				
Westcott Orifice Bristol Case 100 in. differential static with 24 hour clock Serial No. 11831 Company No. 1006	1	Each	130.3262	\$ 130.33
Serial No. 11166 Company No. 1007	1	Each	130.3262	130.33
Serial No. 9703 Company No. 1008	1	Each	130.3262	130.33
<u>METER PIPING</u>				
Single screwed installation with steel needle valves throughout	3	Sets	23.1700	69.51
<u>THERMOMETER</u>				
(No name) brass body 0-120 degrees F 10 in. long 2- 1/2 in. wide scale and tube 8-1/2 in. long	1	Each	1.6563	1.66
<u>GAUGES</u>				
Indicating Pressure Ashcroft brass trimmed CI case No. 858437A with 5 in. dial range 0-200 lbs.	1	Each	2.1692	2.17
Ashcroft brass case with 8 in. dial No. 24537 range 0-400 lbs.	1	Each	8.5966	8.60
Recording Pressure Foxboro 10 in. with 24 hour clock Serial No. A-10923 Chart No. 79870 CI case range 0-100 lbs.	1	Each	35.1092	35.11
Foxboro 10 in. with 24 hour clock Serial No. 47020 Chart No. 79877 Company No. R-57 range 0-500 lbs.	1	Each	35.1092	35.11
<u>GATE VALVES Flanged</u>				
Darling IBBM DD NRS 6 in. 700 lbs. T with 6 x 12- 1/2 in. EH CI 12 belts CFBO	2	Each	43.8687	87.74

## TRANSMISSION SYSTEM MEASURING STATION EQUIPMENT

"B" System

5597

ITEM	QUANTITY	UNIT	UNIT COST	AMOUNT
<u>NORTH FT. WORTH, TARRANT COUNTY, TEXAS, LINE B-7 (Cont'd)</u>				
<u>PITOT TUBE HOUSE (Cont'd)</u>				
<u>GATE VALVES Flanged (Cont'd)</u>				
Darling IBBM DD NRS 6 in. 700 lbs. T with 6 x 12- 1/2 in. EH CI 12 bolts CFBO No. 72	1	Each	43.8687	43.87
12 in. 700 lbs. T with 12 x 20-1/2 in. EH CI LE 16 bolts CFBO	2	Each	145.1893	290.38
Ludlow IBBM DD NRS 6 in. No. 5 with 6 x 12-1/2 in. EH CI 12 bolts CFBO	2	Each	26.2896	52.58
6 in. No. 5-1/2 with 6 x 12- 1/2 in. EH CI 12 bolts CFBO	1	Each	44.8487	44.85
<u>GATE VALVES Screwed</u>				
Crane 3/8 in. brass Std.	2	Each	.5851	1.17
<u>GLOBE VALVES Screwed</u>				
Crane 3/8 in. 125 lbs. WP brass Lunkenheimer	1	Each	.4364	.44
1/2 in. 200 lbs. WP brass Lunkenheimer Renewo	1	Each	1.0909	1.09
1/2 in. 200 lbs. WP brass Walworth 1/4 in. 125 lbs. WP brass	5	Each	1.0909	5.45
(No name) 1/2 in. brass Std.	1	Each	.4067	.41
	1	Each	.5689	.57
<u>NEEDLE VALVES Screwed</u>				
Lunkenheimer 1/4 in. brass Std.	1	Each	.6293	.63
<u>HEADERS</u>				
18 in. x 8 ft. 5 in. with one end 18 in. flanged and other swedged to 8 x 15 in. flange with 6 10 x 6 in. flanged end nipples welded. Made by Pittsburgh VF&C Co. for 500 lbs. GWP	1	Each	340.3600	340.36
<u>PIPE Threaded and Coupled</u> (Random Lengths)	1	Lot		295.73
<u>FITTINGS</u>	1	Lot		237.42

2403

FORM 334 NOV 6-55

## TRANSMISSION SYSTEM MEASURING STATION EQUIPMENT

"B" System

5598

ITEM	QUANTITY	UNIT	UNIT COST	AMOUNT
<u>NORTH FT. WORTH, TARRANT COUNTY,</u> <u>TEXAS, LINE B-7 (Cont'd)</u>				
<u>PITOT TUBE HOUSE (Cont'd)</u>				
WELDS	1	Lot		\$ .85
Material Cost				\$ 1,946.69
Installation				552.61
TOTAL COST INSTALLED				\$ 2,499.30
LOME STAR GAS CO. OWNERSHIP 50%				\$ 1,249.65
<u>NORTH PITOT TUBE HOUSE</u>				
GATE VALVES Flanged				
Darling IBBM DD NRS				
6 in. 700 lbs. T No. 72 with	3	Each	43.8687	\$ 131.61
NH CI CFBO				
12 in. 700 lbs. T No. 72 with	1	Each	145.1893	145.19
NH CI CFBO				
Ludlow IBBM DD NRS	3	Each	44.8487	134.55
6 in. No. 5-1/2 with NH CI				
CFBO				
HEADER				
18 in. x 8 ft. 5 in. one end				
18 in. flanged and other				
swedged to 8 x 15 in. flange				
with 6 10 x 6 in. flanged				
end nipples welded on made				
by Pittsburgh VF&C Co. for				
500 lbs. GWP	1	Each	340.3600	340.36
PIPE Threaded and Coupled				
(Random Lengths)	1	Lot		26.70
FITTINGS	1	Lot		92.57
WELDS	1	Lot		53.23
Material Cost				\$ 924.21
Installation				247.36
TOTAL COST INSTALLED				\$ 1,171.57
LOME STAR GAS CO. OWNERSHIP 50%				\$ 585.79

2404

## TRANSMISSION SYSTEM MEASURING STATION EQUIPMENT

"B" System

5599-5602

ITEM	QUANTITY	UNIT	UNIT COST	AMOUNT
<u>NORTH FT. WORTH, TARRANT COUNTY,</u> <u>TKIAS, LINE B-7 (Cont'd)</u>				
<u>GRAVITOMETER HOUSE</u>				
GRAVITOMETER Acme Recording Serial No. 156 Range 0 to 1.0	1	Each	333.8910	\$ 333.89
REGULATOR Emco 1 in. Type B Service	1	Each	4.8600	4.86
ANGLE VALVES Screwed Lunkenheimer 1/8 in. brass	1	Each	.6565	.66
GATE VALVES Screwed Crane 1/4 in. 125 lbs. WP brass	1	Each	.5848	.58
GLOBE VALVES Screwed (No name) 1/8 in. brass	1	Each	.4037	.40
PIPE Threaded and Coupled (Random Lengths)	1	Lot		.17
FITTINGS	1	Lot		1.46
WELDS	1	Lot		.42
Material Cost				\$ 342.44
Installation				97.13
TOTAL COST INSTALLED				\$ 439.57
LONG STAR GAS CO. OWNERSHIP 50%				\$ 219.79
<u>BRIDGEPORT, WISE COUNTY, TEXAS</u> <u>LINE B-8</u>				
<u>METERS</u>				
Foxboro Type C Orifice Meter Range 100 in. differential 100 lbs. static 24 hour clock Chart No. 89870 Serial No. 60090 Company No. 1243	1	Each	129.6258	\$ 129.63
Foxboro Type T Differential Re- corder Range 20 in. differen- tial only with 24 hour clock Chart No. 89863 Serial No. A- 77894 Company No. 1243A	1	Each	106.1254	106.13

2404

2405

Form 854-100M-7-53

## TRANSMISSION SYSTEM MEASURING STATION EQUIPMENT

"B" System

5603-5606

ITEM	QUANTITY	UNIT	UNIT COST	AMOUNT
<u>STATION C PLUS 06, JUNCTION OF LINES B AND B-9, CLAY COUNTY, TEXAS, LINE B-9</u>				
REGULATORS				
Fulton 1-1/2 in. HP with 5-1/2 in. diaphragm case 4 bolts screwed	1	Each	26.2700	\$ 26.27
Emco 2 in. No. 4250 Balanced Valve with 9-1/2 in. diaphragm case 6 bolts with 2 x 6-1/2 in. EH CI 4 bolts CFBO	1	Each	89.6518	89.65
GAUGES				
Recording Pressure Foxboro 10 in. IB & Rim Serial No. 18953 with 7 day clock Range 0-100 lbs.	1	Each	46.5752	46.58
Indicating Pressure Foxboro IBBR with 5 in. dial Range 0-250 lbs.	1	Each	4.3114	4.31
Ashcroft with 8 in. dial Range 0-600 lbs.	1	Each	13.1926	13.19
GATE VALVES Screwed				
Lunkenheimer 1 in. 150 lbs. WP brass	1	Each	5.4061	5.41
Darling IBBM ID NBS	1	Each	13.1367	13.14
2 in. 1000 lbs. T No. 101	3	Each	34.3870	103.16
4 in. 1600 lbs. T				
GATE VALVES Flanged				
Westcott 4 in. 500 lbs. WP ID OS&Y with 4 x 10 in. 8 bolts CFBO	4	Each	35.4451	141.78
NEEDLE VALVES				
Walworth 1/4 in. brass Std.	1	Each	.4838	.48
PIPE Threaded and Coupled (Random Lengths)				
	1	Lot		14.69
	1	Lot		84.68
FITTINGS				
Material Cost				\$ 543.34
Installation				154.30
TOTAL COST INSTALLED				\$ 697.64

2406

## TRANSMISSION SYSTEM MEASURING STATION EQUIPMENT

"B" System

5607

ITEM	QUANTITY	UNIT	UNIT COST	AMOUNT
<u>CHICO, WISE COUNTY, TEXAS,</u> <u>LINE B-13 (Cont'd)</u>				
<b>PLUG VALVES Flanged</b>				
Barco				
2 in. 250 lb. WP with 2 x 6-1/2 in. EH CI 4 bolts CFBO	9	Each	14.2677	\$ 128.41
2 in. 250 lb. WP with 2 x 6-1/2 in. EH CI 4 bolts CFBO (50% Ownership)	1	Each	14.2677	7.13
2 in. 250 lb. WP	2	Each	12.3409	24.68
<b>PIPE Threaded and Coupled</b> (Random Lengths)				
	1	Lot		2.16
<b>PIPE Plain End (Random Lengths)</b>				
	1	Lot		2.83
<b>CUSHIONS</b>				
16 x 35 in. with baseball welded ends with 3 2 in. welded openings and 1 1/4 in. collar welded	1	Each	42.2300	42.23
<b>FITTINGS</b>				
	1	Lot		18.55
<b>WELDS</b>				
	1	Lot		22.29
Material Cost				\$ 543.30
Installation				147.97
<b>TOTAL COST INSTALLED</b>				<b>\$ 691.27</b>
<u>HOLLOWAY FUEL LINE, CLAY COUNTY,</u> <u>TEXAS, LINE B</u>				
<b>REGULATORS</b>				
Fulton 1-1/4 in. HP Screwed	1	Each	22.1000	\$ 22.10
<b>GAUGES</b>				
Indicating Pressure Shaeffer & Budenberg with 7 in. dial Range 0-300 lbs.	1	Each	18.3990	18.40
<b>GATE VALVES Screwed</b>				
Darling 2 in. 1000 lbs. T No. 221 NRS	1	Each	13.1367	13.14
Westcott 2 in. 500 lbs. WP NRS	3	Each	12.7711	38.31



2407

Form 254-100M-7-52

## TRANSMISSION SYSTEM MEASURING STATION EQUIPMENT

"B" System

5608

ITEM	QUANTITY	UNIT	UNIT COST	AMOUNT
<u>HOLLOWAY FUEL LINE, CLAY COUNTY, TEXAS, LINE B (Cont'd)</u>				
GLOBE VALVES Screwed Lunkenheimer 1/4 in. 200 lbs. WP brass	1	Each	.6643	.66
PIPE Threaded and Coupled (Random Lengths)	1	Lot		.48
FITTINGS	1	Lot		6.42
WELDS	1	Lot		.23
Material Cost				\$ 99.74
Installation				28.26
TOTAL COST INSTALLED				\$ 128.00
<u>SAXET OIL COMPANY, CLAY COUNTY, TEXAS, LINE B</u>				
METERS				
Foxboro Type C Orifice range 100 in. differential 500 lbs. static with 24 hour clock Chart No. 85828 Serial No. 18807 Company No. 1101	1	Each	141.2682	\$ 141.27
METER PIPING				
Single screwed installation with steel needle valves throughout	1	Set	23.1700	23.17
GATE VALVES Screwed				
Westcott				
4 in. 500 lbs. WP NRS	4	Each	24.8107	99.24
2 in. 500 lbs. WP NRS	1	Each	12.7711	12.77
GATE VALVES Flanged				
Crane				
4 in. 1000 lbs. T NRS CFBO	1	Each	29.5063	29.51
PIPE Threaded and Coupled (Random Lengths)	1	Lot		29.29
FITTINGS	1	Lot		42.01

2408

## TRANSMISSION SYSTEM MEASURING STATION EQUIPMENT

5609

"B" System

ITEM	QUANTITY	UNIT	UNIT COST	AMOUNT
<u>SAKET OIL COMPANY, CLAY COUNTY, TEXAS, LINE B (Cont'd)</u>				
WELDS	1	Lot		\$ 3.43
Material Cost				\$ 380.69
Installation				107.14
TOTAL COST INSTALLED				\$ 487.83
<u>TAP TO U.S. GOVERNMENT HELIUM PLANT MEASURING STATION - STATION 1 PLUS 13.9 - NORTH FT. WORTH, TARRANT COUNTY, TEXAS, LINE B-7</u>				
METERS				
Metric No. 35-B Serial No. 07107 100 lbs. WP with Metric PV&T recording gauge 0-100 lbs. static with 7 day Westcott clock	1	Each	123.6600	\$ 123.66
REGULATORS				
Fulton 1 in. HP with 5-1/2 in. diaphragm case 4 bolts screwed	1	Each	18.0550	18.06
GAUGES				
Indicating Pressure Foxboro IRBR with 3-1/2 in. dial Range 0-60 lbs.	1	Each	4.3114	4.31
GATE VALVES Flanged				
Walworth IRBM ID OS&Y 2 in. 125 lbs. WP with 2 x 6 in. CI Std. CFBO	4	Each	10.1093	40.44
GLOBE VALVES				
Lunkenheimer 1/4 in. brass Std. BS	2	Each	.6643	1.33
SAFETY VALVES				
Crane 1 in. 125 lbs. screwed	1	Each	5.6714	5.67
PIPE Threaded and Coupled (Random Lengths)				
	1	Lot		3.24

2409

Form 854-100M-7-53

## TRANSMISSION SYSTEM MEASURING STATION EQUIPMENT

"B" System

5610

ITEM	QUANTITY	UNIT	UNIT COST	AMOUNT
TAP TO U.S. GOVERNMENT HELIUM PLANT MEASURING STATION - STATION 1 PLUS 13.9 - NORTH FT. WORTH, TARRANT COUNTY, TEXAS, LINE B-7 (Cont'd)				
FITTINGS	1	Lot		\$ 14.12
WELDS	1	Lot		3.72
Material Cost				\$ 214.55
Installation				59.87
TOTAL COST INSTALLED				\$ 274.42
TRINITY PORTLAND CEMENT COMPANY, NORTH FT. WORTH, TARRANT COUNTY, TEXAS, LINE B-12				
REGULATORS				
Fulton 1 in. HP with 7-1/4 in. diaphragm case 4 bolts	1	Each	18.0550	\$ 18.06
GAUGES				
Indicating Pressure				
Foxboro IBER with 5 in. dial	1	Each	4.3114	4.31
Range 0-500 lbs.	1	Each	4.3114	4.31
Range 0-250 lbs.				
GATE VALVES Screwed				
Westcott IIRM ID NRS				
6 in. 500 lbs. WP	2	Each	42.0782	84.16
GLOBE VALVES Screwed				
Powell 1/4 in. 125 lbs. brass BS	2	Each	1.4430	2.89
PIPE Threaded and Coupled (Random Lengths)				
	1	Lot		5.09
FITTINGS	1	Lot		55.10
WELDS	1	Lot		9.51
Material Cost				\$ 183.43
Installation				49.40
TOTAL COST INSTALLED				\$ 232.83

2410

## TRANSMISSION SYSTEM MEASURING STATION EQUIPMENT

5611

"B" System

m 564-100M-7-58

ITEM	QUANTITY	UNIT	UNIT COST	AMOUNT
TRINITY PORTLAND CEMENT COMPANY - NORTH FT. WORTH, TARRANT COUNTY, TEXAS, LINE B-12				
<u>METER HOUSE</u>				
<u>METERS</u>				
Foxboro Type 207 Orifice range 100 in. differential 250 lbs. static 24 hour clock Chart No. 858049 Serial No. A62975 Company No. 1261	1	Each	143.1046	143.10
Foxboro Type 105 Differential Recorder range 20 in. differ- ential only 24 hour clock Chart No. 858050 Serial No. A57289 Company No. 1261	1	Each	119.9348	119.93
<u>METER PIPING</u>				
Wide range screwed installation with steel needle valves	2	Sets	25.1700	50.34
<u>GAUGES</u>				
Indicating Pressure Foxboro IBBR with 5 in. dial Range 0-500 lbs.	1	Each	4.3114	4.31
<u>REGULATORS</u>				
Fulton 6 in. HP with 10-1/2 in. diaphragm case 8 bolts flanged	1	Each	206.1370	206.14
Emco 1 in. Type B LP with 8 in. diaphragm case	1	Each	4.8600	4.86
Heroules 1 in. HP with 4-1/2 in. diaphragm case screwed	1	Each	8.3400	8.34
<u>GRAVITOMETER</u>				
Acme Serial No. 107 range .5 - 1.0	1	Each	333.8910	333.89
<u>GATE VALVES Flanged</u>				
Westcott IBBM DD NRS				
6 in. 200 lbs. WP with 6 x 12- 1/2 in. EH CI 8 bolts CFBO	2	Each	24.7470	49.49
6 in. 300 lbs. T with 6 x 12- 1/2 in. wedge EH CI 8 bolts CFBO	5	Each	23.0891	115.45
6 in. 350 lbs. T with 6 x 12- 1/2 in. EH CI 8 bolts CFBO	1	Each	24.7470	24.75
<u>GATE VALVES Screwed</u>				
Powell 1/4 in. brass Std.	1	Each	1.1109	1.11

2411

Form 204-120M-7-52

## TRANSMISSION SYSTEM MEASURING STATION EQUIPMENT.

"B" System

5612-5618

ITEM	QUANTITY	UNIT	UNIT COST	AMOUNT
<b>TRINITY PORTLAND CEMENT COMPANY - NORTH FT. WORTH, TARRANT COUNTY, TEXAS, LINE B-12 (Cont'd)</b>				
PIPE Threaded and Coupled (Random Lengths)	1	Lot		\$ 29.99
PIPE Plain End (Random Lengths)	1	Lot		7.06
<b>HEADERS</b>				
With baseball welded ends				
8 x 78 in. with 2 6 in. welded openings and 1 8 in. welded opening and with 1 1/4 in. collar welded	1	Each	36.7800	36.78
8 x 78 in. with 4 6 in. weld- ed openings	1	Each	37.7400	37.74
8 x 78 in. with 2 6 in. and 1 8 in. welded opening	1	Each	36.4900	36.49
<b>FITTINGS</b>	1	Lot		66.47
<b>WELDS</b>	1	Lot		12.63
Material Cost				\$ 1,288.87
Installation				362.45
<b>TOTAL COST INSTALLED</b>				<b>\$ 1,651.32</b>
<b>PETROLIA COMPRESSING STATION LOT, CLAY COUNTY, TEXAS LINE B</b>				
<b>METERS</b>				
Foxboro Type C Orifice range 100 in. differential 500 lbs. static with 24 hour clock Chart No. 85828 Serial No. 70977 Company No. 12	1	Each	141.2682	\$ 141.27
Foxboro Type T Differential Re- cording range 20 in. differen- tial only with 24 hour clock Chart No. 89863 Serial No. 71848 Company No. 12	1	Each	106.1254	106.13
<b>METER PIPING</b>				
Wide range screwed installation with steel needle valves throughout	1	Set	25.1700	25.17

## TRANSMISSION SYSTEM MEASURING STATION EQUIPMENT

"C" System

5619-5620

RM 504 50M 0-32

ITEM	QUANTITY	UNIT	UNIT COST	AMOUNT
<b>IRVING, DALLAS COUNTY, TEXAS, LINE C-1</b>				
<b>METERS</b>				
Emco No. 4 500 lb. T Serial No. 4614 with Wylie PV&T Recording Gauge Serial No. 2624 0-76 lbs. Static with 7 day Foxboro clock	1	Each	322.2910	322.29
<b>REGULATORS</b>				
Fulton 1-1/4 in. HP 5-1/2 in. Diaphragm Case 4 Bolts Screwed	1	Each	22.1000	22.10
Fulton 1-1/4 in. HP 9-1/2 in. Diaphragm Case 4 Bolts Screwed	1	Each	22.1000	22.10
<b>GAUGES</b>				
Indicating Pressure Foxboro Brass Rim CI Case 5 in. Dial Range 0-250 lbs.	1	Each	4.3114	4.31
Range 0-500 lbs.	1	Each	4.3114	4.31
<b>GATE VALVES Flanged</b>				
Crane 2 in. 1000 lb. T Brass Stem DD OS&Y with EH CI CFBO	4	Each	19.3618	77.45
Walworth Brass Stem DD OS&Y 2 in. 175 lb. WP with CI Std. CFBO	4	Each	10.1093	40.44
2 in. 700 lb. T with CI Std. CFBO (50% Ownership)	1	Each	17.2655	8.63
2 in. 700 lb. T with EH CI CFBO	1	Each	17.2655	17.27
2 in. 700 lb. T with EH CI LE	2	Each	17.2655	34.53
<b>NEEDLE VALVES Screwed</b>				
Crane 1/4 in. 125 lb. WP Brass	2	Each	.4838	.97
<b>SAFETY VALVES Screwed</b>				
BON-1 2 in. 125 lb. WP L&W Type	1	Each	5.6714	5.67
<b>PIPE Threaded and Coupled (Random Lengths)</b>				
	1	Lot		2.00
<b>PIPE Plain End (Random Lengths)</b>				
	1	Lot		3.39



## TRANSMISSION SYSTEM MEASURING STATION EQUIPMENT

5621

"C" System

ITEM	QUANTITY	UNIT	UNIT COST	AMOUNT
<u>OAKLAKE, DALLAS, DALLAS COUNTY, TEXAS, LINE 2ND-C</u>				
<b>REGULATORS</b>				
Emco Service 1 in. 8 in. diaphragm case screwed	1	Each	4.8600	4.86
Hercules 1 or 1/2 in. HP Screwed	1	Each	8.3400	8.34
<b>GRAVITOMETER</b>				
Precision Instrument Company Serial No. 243 Company No. G-7 range .5 to 1.0 with 7 day clock	1	Each	333.8910	333.89
<b>AUTOMATIC CONTROL VALVES Flanged</b>				
Fulton 12 in. differential with 16-1/2 in. diaphragm case 10 bolts	1	Each	925.3170	925.32
<b>GATE VALVES Flanged</b>				
Crane 12 in. 700 lbs. T. OS&Y Brass Stem with EH G I LE CFBO	3	Each	168.9144	506.74
<b>GATE VALVES Screwed</b>				
Lunkheimer 3/8 in. 150 lbs. WP RS Brass	1	Each	.5851	.59
<b>GLOBE VALVES</b>				
Crane Angle 12 in. 250 lbs. WP OS&Y Steel Stem CFBO	3	Each	205.4897	616.47
Crescent 1/8 in. Brass Std. Screwed	2	Each	.5325	1.07
Lunkheimer Screwed Brass				
3/8 in. 200 lbs. WP	2	Each	.8043	1.61
1/2 in. 200 lbs. WP	1	Each	1.0909	1.09
Powell 1/8 in. 125 lbs. WP Brass Screwed	1	Each	.5325	.53
<b>NEEDLE VALVES Screwed</b>				
Lunkheimer 1/4 in. 200 lbs. WP Brass	2	Each	.6293	1.26
Metric 1/4 in. Std.	1	Each	1.2588	1.26
<b>PIPE Threaded and Coupled (Random Lengths)</b>				
	1	Lot		165.83
<b>HEADERS</b>				
16 in. x 12 ft. with orange peel welded ends 1 16 in. and 3 12 in. welded openings	1	Each	121.4300	121.43

2414

## TRANSMISSION SYSTEM MEASURING STATION EQUIPMENT

"C" System

5622

ITEM	QUANTITY	UNIT	UNIT COST	AMOUNT
<u>OAKLAWN, DALLAS, DALLAS COUNTY,</u> <u>TEXAS, LINE 2ND-C (Cont'd)</u>				
<b>FITTINGS</b>	1	Lot		\$ 203.65
<b>WELDS</b>	1	Lot		2.55
Material Cost				\$ 2,896.49
Installation				821.88
<b>TOTAL COST INSTALLED</b>				<b>\$ 3,718.37</b>
<u>MARATHON OIL COMPANY, NORTH FORT</u> <u>FORTH, TARRANT COUNTY, TEXAS,</u> <u>LINE C-5</u>				
<b>METERS</b>				
Foxboro Type C Orifice range 100 in. differential 250 lbs. static 24 hour clock Chart No. 85840 Serial No. A-36210 Company No. 1098	1	Each	133.5948	\$ 133.59
Foxboro Type T Differential Recorder range 20 in. differ- ential only 24 hour clock Chart No. 89863 Serial No. L-1011 Company No. 1098A	1	Each	106.1254	106.13
<b>METER PIPING</b>				
Wide range screwed installation with steel needle valves	1	Set	25.1700	25.17
<b>GATE VALVES Flanged</b>				
Crane DD OS&Y				
2 in. 700 lbs. T with KH CI CFBO	2	Each	17.2449	34.49
4 in. 700 lbs. T with KH CI CFBO	2	Each	32.3367	64.67
<b>PIPE Threaded and Coupled (Random</b> <b>Lengths</b>				
	1	Lot		8.13

2415

Form 254 100M 7-59

FORM 254

## TRANSMISSION SYSTEM MEASURING STATION EQUIPMENT

"C" System

5623-5624

ITEM	QUANTITY	UNIT	UNIT COST	AMOUNT
<u>MARATHON OIL COMPANY, NORTH FORT WORTH, TARRANT COUNTY, TEXAS, LINE C-5 (Cont'd)</u>				
FITTINGS	1	Lot		\$ 66.81
WELDS	1	Lot		.45
Material Cost				\$ 39.44
Installation				124.67
TOTAL COST INSTALLED				\$ 564.11
<u>TARRANT COUNTY POOR FARM, TARRANT COUNTY, TEXAS, LINE C-5-1</u>				
METERS				
Emco No. 2-1/2 50 lb. T Serial No. 5289 with Foxboro PV&T Recording Gauge Serial No. F-181 with 7 day Foxboro clock	1	Each	153.8788	\$ 153.88
PIPE Threaded and Coupled (Random Lengths)	1	Lot		.95
FITTINGS	1	Lot		19.54
Material Cost				\$ 174.37
Installation				49.52
TOTAL COST INSTALLED				\$ 223.89
<u>TARRANT COUNTY POOR FARM, TARRANT COUNTY, TEXAS (REGULATOR HOUSE) LINE C-5-1</u>				
REGULATORS				
Fulton 2 in. HP 19 in. diaphragm case	1	Each	54.9600	\$ 54.96

2416

## TRANSMISSION SYSTEM MEASURING STATION EQUIPMENT

"C" System

5625-5634

ITEM	QUANTITY	UNIT	UNIT COST	AMOUNT
STATION 1303 PLUS 21.5, NEAR IRVING, DALLAS COUNTY, TEXAS, LINE C				
GLOBE VALVES Screwed Lunkenheimer 1/2 in. 200 lb. WP brass	2	Each	1.0909	\$ 2.18
FITTINGS	1	Lot		53.08
Material Cost				\$ 55.26
Installation				15.69
TOTAL COST INSTALLED				\$ 70.95
STATION 1314 PLUS 39, IRVING COMPRESSING STATION SITE REGU- LATOR HOUSE, DALLAS COUNTY, TEXAS, LINE C				
REGULATORS				
Emco 12 in. HP Balanced Valve Serial No. 2099 8 in. dia- phragm case-6 bolts flanged	1	Each	688.6250	\$ 688.63
GAUGES				
Indicating Pressure Foxboro Brass Rim Cast Iron Case 5 in. dial Range 0-250 lbs.	1	Each	4.3114	4.31
GATE VALVES Flanged				
Atwood 16 in. EH NRS ribbed	3	Each	146.9238	440.77
Crane 6 in. 125 lb. WP ID				
OS&Y with CI Std. CFBO	1	Each	30.0276	30.03
Darling 6 in. 700 lb. T No. 72 NRS with EH CI CFBO	1	Each	43.8687	43.87
GATE VALVES Screwed				
Atwood 3 in. 800 lb. T Type 4P NRS PD No. 63104 LE	1	Each	19.8715	19.87

2417

FORM 124 MAR 63

## TRANSMISSION SYSTEM MEASURING STATION EQUIPMENT

"E" System

5635

ITEM	QUANTITY	UNIT	UNIT COST	AMOUNT
<b>CLARKSVILLE, RED RIVER COUNTY, TEXAS, LINE E</b>				
<b>METERS</b>				
Foxboro Type 207 Orifice Range 100 in. Differential, 100 lb. Static, Serial No. 69823, Com- pany No. 1272 with 24 hour clock, Chart No. 898039	1	Each	139.0256	\$ 139.03
Foxboro Type 105 Differential Recorder, Range 20 in. Differ- ential only, Serial No. A-8280 Company No. 1272-A, with 24 hour clock, Chart No. 858050	1	Each	119.9348	119.93
<b>METER PIPING</b>				
Wide Range Screwed Installation with steel needle valves	1	Each	25.1700	25.17
<b>REGULATORS</b>				
Fulton, 2 in. HP 7-1/2 diaph- ragm case screw	1	Each	54.9600	54.96
Emco, 4 in. EP balanced valve Serial No. 7487 with 11 in. diaphragm case, 6 belts, with CI LE EH CFBO	1	Each	158.7412	158.74
<b>GAUGES</b>				
Indicating Pressure Cresby ER CI Case 5 in. dial Range 0-250 lbs.	1	Each	3.7586	3.76
Recording Pressure Foxboro CI Case and Rim, 10 in. 7 day clock Range 0-300 lbs.	1	Each	46.5752	46.58
<b>GATE VALVES Flanged</b>				
Valworth OS&Y 4 in. 700 lbs. T with EH CI LE CFBO	1	Each	32.2646	32.26
6 in. 700 lbs. with EH CI LE CFBO	4	Each	50.9057	203.62
6 in. 700 lbs. T	4	Each	45.7815	183.13
<b>GLOBE VALVES Screwed</b>				
Lunkenheimer, 1/4 in. 200 lbs. WP Brass	2	Each	.6643	1.33
<b>NEEDLE VALVES Screwed</b>				
Metric, 1/4 in.	1	Each	1.2588	1.26

## TRANSMISSION SYSTEM MEASURING STATION EQUIPMENT

5636

"E" System

ITEM	QUANTITY	UNIT	UNIT COST	AMOUNT
<b>CLARKSVILLE, RED RIVER COUNTY, TEXAS, LINE E (Cont'd)</b>				
<b>PLUG VALVES</b> Flanged Nordstrom, 6 in. 250 lbs. WP with KH CI LE CFBO	2	Each	93.4849	\$ 186.97
<b>SAFETY VALVES</b> Crane, Lever and Weight Type 4 in. 125 lbs. WP	1	Each	15.7096	15.71
<b>HEADERS</b> 18 x 78 in. with baseball welded ends and 4 6 in. openings	2	Each	69.8900	139.78
<b>PIPS</b> Plain End (Random Lengths)	1	Lot		33.36
<b>FITTINGS</b>	1	Lot		100.33
<b>WELDS</b>	1	Lot		46.49
Material Cost				\$ 1,492.41
Installation				410.64
<b>TOTAL COST INSTALLED</b>				<b>\$ 1,903.05</b>
<b>DENISON, GRAYSON COUNTY, TEXAS, LINE E-1</b>				
<b>METERS</b> Foxboro Type 207 Orifice Range 100 in. Differential, 250 lbs. Static, Serial No. A-69122, Company No. 28 with 24 hour clock, Chart No. 858049	1	Each	143.1046	143.10
Foxboro Type 105 Differential Recorder, Range 20 in. Differ- ential only, Serial No. A- 69579 Company No. 28-A with 24 hour clock, Chart No. 858050	1	Each	119.9348	119.93
<b>METER PIPING</b> Wide Range screwed installation with steel needle valves	1	Each	25.1700	25.17
<b>REGULATORS</b> Fulton, 2 in. HP CFBO 7-1/4 in. diaphragm	1	Each	67.5040	67.50



## TRANSMISSION SYSTEM MEASURING STATION EQUIPMENT

5637

## "E" System

ITEM	QUANTITY	UNIT	UNIT COST	AMOUNT
<b>DENISON, GRAYSON COUNTY, TEXAS, LINE E-1 (Cont'd)</b>				
<b>REGULATORS (Cont'd)</b>				
Emco, Flanged balanced valve 8 in. No. 2908, 8 in. diaphragm case, 6 bolts, 600 lbs. inlet, 50 to 100 lbs. outlet HP	1	Each	379.5000	379.50
2 in. No. 1393, high pressure 12-1/2 in. diaphragm case, 6 bolts 600 lbs. inlet pressure; 250 lbs. outlet pressure	1	Each	87.7250	87.73
<b>GAUGES</b>				
Indicating Pressure Foxboro scale 0-500 lbs. Brass Rim, 5 in. dial steel tube, CI case, Model A	1	Each	4.3114	4.31
<b>GATE VALVES Flanged</b>				
Atwood, 8 in. No. 2-P OS&Y Std. CFBO	1	Each	45.7933	45.79
Atwood, 8 in. No. 4-P No. 20105 NRS with KH LE CFBO	1	Each	75.6047	75.60
Crane, 2 in. DD 1000 lb. T OS&Y	1	Each	17.4350	17.44
Ludlow, 6 in. 600 lbs. T No. 5- 1/2 KH LE NRS CFBO	1	Each	44.8447	44.84
Walworth, 6 in. DD 700 lbs. T OS&Y	2	Each	45.7815	91.56
6 in. DD 1000 lbs. T KH LE OS&Y CFBO	1	Each	59.4583	59.46
<b>GATE VALVES Screwed</b>				
Guaranteed, 6 in. 600 lbs. T LE NRS	4	Each	35.5111	142.04
Ludlow, 2 in. 600 lbs. T LE NRS	1	Each	11.6372	11.64
<b>GLOBE VALVE Screwed</b>				
Lunkenheimer, 1/2 in. 200 lbs. WP Brass Screw	2	Each	1.0909	2.18
<b>NEEDLE VALVE Screwed</b>				
Lunkenheimer, 1/4 in. 125 lbs. WP Brass	1	Each	.6293	.63
<b>SAFETY VALVES Flanged</b>				
Lunkenheimer, 4 in. 250 lbs. WP Non-Return OS&Y KH CFBO	1	Each	95.7188	95.72

2420

## TRANSMISSION SYSTEM MEASURING STATION EQUIPMENT

"E" System

5638

ITEM	QUANTITY	UNIT	UNIT COST	AMOUNT
<b>DENISON, GRAYSON COUNTY, TEXAS, LINE E-1 (Cont'd)</b>				
PIPE Threaded and Coupled (Random lengths)	1	Lot		\$ 83.42
<b>HEADERS</b>				
10 x 60 in. flat end welded with 2 6 in. openings and 1 10 in. opening	1	Each	38.5100	38.51
10 x 67 in. orange peel welded 3 6 in. openings and 1 8 in. opening	1	Each	52.9500	52.95
<b>FITTINGS</b>	1	Lot		133.24
<b>WELDS</b>	1	Lot		144.50
Material Cost				\$ 1,866.76
Installation				489.12
<b>TOTAL COST INSTALLED</b>				<b>\$ 2,355.88</b>
<b>SHERMAN, GRAYSON COUNTY, TEXAS, LINE E-2</b>				
<b>METERS</b>				
Foxboro Type 207 Orifice Range 100 in. Differential, 250 lbs. Static Serial No. A-062982, Company No. 30 with 24 hour clock, Chart No. 858049	1	Each	143.1046	\$ 143.10
Foxboro Type 105 Differential Recorder, Range Type 20 in. Differential only, Serial No. A-56072 Company No. 30-A, with 24 hour clock, Chart No. 858050	1	Each	119.9348	119.93
<b>METER PIPING</b>				
Wide Range Screwed Installation with steel needle valves	1	Each	25.1700	25.17

2421

Form 304 - 6-60 - 7-53

Form 304

## TRANSMISSION SYSTEM MEASURING STATION EQUIPMENT

"E" System

5639

ITEM	QUANTITY	UNIT	UNIT COST	AMOUNT
<b>SHERMAN, GRAYSON COUNTY, TEXAS, LINE E-2 (Cont'd)</b>				
<b>REGULATORS</b>				
Emco, Balanced valve flanged 6 in. 600 lbs. No. 1993, 8 in. diaphragm HP 6 bolts	1	Each	241.0000	241.00
8 in. No. 2900, 9-1/2 in. dia- phragm, HP 6 bolts	1	Each	379.5000	379.50
<b>GAUGES</b>				
Indicating Pressure Ashcroft scale 0-200 lbs. BR 5 in. dial CI case, 1/4 in.	1	Each	2.1692	2.17
<b>GATE VALVES</b>				
Walworth DD OS&Y 6 in. 700 lbs. T LE KH CFBO	2	Each	50.9057	101.81
6 in. 700 lbs. T Flanged	1	Each	45.7815	45.78
Atwood NRS 8 in. Style 4-P LE KH CFBO	1	Each	75.6047	75.60
Atwood OS&Y 8 in. 250 lbs. Style 2-P Std. CFBO	1	Each	45.7933	45.79
Darling NRS 6 in. 700 lbs. T No. 72 LE KH CFBO	1	Each	43.8687	43.87
Guaranteed NRS 6 in. 600 lbs. T Std. Screw LE	4	Each	35.5111	142.04
<b>NEEDLE VALVES Screwed</b>				
Lunkenheimer, BR 1/4 in.	1	Each	.6293	.63
<b>GLOBE VALVES Screwed</b>				
Lunkenheimer, Br. 1/2 in. 125 lbs. WP	1	Each	1.3145	1.31
1/2 in. 200 lbs. WP	1	Each	1.0909	1.09
Crane Brass 3/8 in. 125 lbs. WP	1	Each	.7223	.72
1/2 in. 125 lbs. WP	2	Each	.9270	1.85
<b>PIPE Plain End (Random Lengths)</b>				
	1	Lot		29.25
<b>HEADERS</b>				
10 x 60 in. flat end welded, with 2 6 in. openings; 1 10 in. openings	1	Each	38.5100	38.51
10 x 68 in., orange peel welded, with 3 6 in., and 1 8 in. opening	1	Each	53.0500	53.05

2422

## TRANSMISSION SYSTEM MEASURING STATION EQUIPMENT

"E" System

5640-5648

ITEM	QUANTITY	UNIT	UNIT COST	AMOUNT
<b>SHERMAN, GRAYSON COUNTY, TEXAS, LINE E-2 (Cont'd)</b>				
<b>HEADERS (Cont'd)</b>				
18 x 65 in., baseball welded with 3-6 in. and 1-8 in. opening cushion and 1/4 in. welded cellar	1	Each	69.6200	\$ 69.62
8 x 66 in., baseball welded with 3-6 in. openings	1	Each	33.3300	33.33
<b>FITTINGS</b>	1	Lot		74.91
<b>WELDS</b>	1	Lot		8.22
Material Cost				\$ 1,678.25
Installation				474.29
<b>TOTAL COST INSTALLED</b>				<b>\$ 2,152.54</b>
<b>WHITESBORO, GRAYSON COUNTY, TEXAS, LINE E-3</b>				
<b>METERS</b>				
Forbore Type C Orifice Range 100 in. Differential 100 lbs. Static, Serial No. 16153, Com- pany No. 1260 with 24 hour clock, Chart No. 89870	1	Each	129.6258	\$ 129.63
Forbore Type F Differential Re- corder, Range 20 in. Differen- tial only, Serial No. 78325, Company No. 1260-A, with 24 hour clock, Chart No. 89863	1	Each	106.1254	106.13
<b>METER PIPING</b>				
Wide Range Screwed Installation with steel needle valves	1	Set	25.1700	25.17
<b>REGULATORS</b>				
High Pressure, Fulton Screw 5- 1/2 in. diaphragm 1-1/4 in. 4 bolts	1	Each	22.1000	22.10
Flange 2 in. 11 in. dia- phragm, 6 bolts	1	Each	87.7250	87.73

2423

Form 361 100M 7-48

## TRANSMISSION SYSTEM MEASURING STATION EQUIPMENT

"E" System

5649

Form 361

ITEM	QUANTITY	UNIT	UNIT COST	AMOUNT
<b>DODD CITY, FANNIN COUNTY, TEXAS</b> <b>LINE E-8 (Cont'd)</b>				
<b>WELDS</b>	1	Lot		\$ 29.87
Material Cost				\$ 642.16
Installation				173.89
<b>TOTAL COST INSTALLED</b>				<b>\$ 816.05</b>
<b>GAINESVILLE, COOKE COUNTY, TEXAS,</b> <b>LINE E-9</b>				
<b>METERS</b>				
Foxboro Type 207 Orifice Range 100 in. Differential, 250 lbs. Static Serial No. A-29729 Com- pany No. 1182 with 24 hour clock, Chart No. 858049	1	Each	143.1046	\$ 143.10
Foxboro Type 105 Differential Recorder, Range 20 in. Dif- ferential only, Serial No. 25168 Company No. 1182-A with 24 hour clock, Chart No. 858050	1	Each	119.9348	119.93
<b>METER PIPING</b>				
Wide Range Screwed Installation with steel needle valves	1	Set	25.1700	25.17
<b>REGULATORS</b>				
Emco high pressure, 4 in. balanc- ed valve flanged with 8-1/2 in. diaphragm case No. 2135	1	Each	155.2250	155.23
<b>GAUGE</b>				
Foxboro indicating pressure with 5 in. dial HR, CI case 0-500 lbs.	1	Each	4.3114	4.31
<b>GATE VALVES Flanged</b>				
Crane OS&Y				
4 in. 1000 lbs. T	2	Each	32.2173	64.43
4 in. 1000 lbs. T. CFBO (Flanges are 4 x 10 x 1-1/4 in. 8 bolts)	5	Each	37.7335	188.67

2424

## TRANSMISSION SYSTEM MEASURING STATION EQUIPMENT

"X" System

5650

100M 1-52

ITEM	QUANTITY	UNIT	UNIT COST	AMOUNT
<b>GAINESVILLE, COOKE COUNTY, TEXAS, LINE E-9 (Cont'd)</b>				
<b>GATE VALVES Flanged (Cont'd)</b>				
Crane OS&Y 6 in. 1000 lbs. T. CFBO (Flanges are 6 x 12 x 1-3/8 in. 12 bolts)	1	Each	59.1287	\$ 59.13
<b>GATE VALVES Screwed</b> O.I.C. 2-in. 250 lbs. WP OS&Y	1	Each	17.3723	17.37
<b>NEEDLE VALVES Screwed</b> Lunkenheimer 1/4 in. Brass 125 lbs. WP	1	Each	.6293	.63
<b>GLOBE VALVES Screwed</b> Lunkenheimer 1/2 in. 125 lbs. WP Brass	4	Each	.6176	2.47
<b>PIPE Plain End (Random Lengths)</b>	1	Lot		17.70
<b>WELDERS</b>				
6 x 68 in. baseball welded 4 - 4 in. openings	1	Each	26.9200	26.92
6 x 68 in. baseball welded 2 - 4 in. and 1 - 6 in. openings, 1 - 2 in. opening	1	Each	27.5000	27.50
6 x 72 in. Flat end welded, 2 - 4 in. and 1 - 6 in. opening	1	Each	22.8800	22.88
<b>FITTINGS</b>	1	Lot		64.69
<b>WELDS</b>	1	Lot		54.36
<b>Material Cost</b>				\$ 994.49
<b>Installation</b>				267.00
<b>TOTAL COST INSTALLED</b>				<u>\$ 1,261.49</u>



2425

Form 334 10-28 1-28

## TRANSMISSION SYSTEM MEASURING STATION EQUIPMENT

"E" System

5651-5671

ITEM	QUANTITY	UNIT	UNIT COST	AMOUNT
<b>GAINESVILLE, COOKE COUNTY, TEXAS</b> <b>LINE E-9</b>				
<b>REGULATOR</b> Fulton 6 in. high pressure balanced valve with 11 in. diaphragm case 6 bolts (less flanges and bolts) flanged	1	Each	201.0128	\$ 201.01
<b>GAUGE</b> Foxboro indicating pressure HM CI case, 5 in. dial scale 0- 50 lbs.	1	Each	4.3114	4.31
<b>GATE VALVES Flanged</b> Atwood 6 in. No. 4-P HRS	3	Each	44.6019	133.81
<b>GATE VALVES Screwed</b> (No Name) 1/4 in. Br. Std.	1	Each	.5848	.58
<b>GATE VALVES Screwed</b> Lunkenheimer clip valve 2 in. 100 lbs. WP HRS	1	Each	3.5032	3.50
<b>PIPE Threaded and Coupled</b> (Random lengths)	1	Lot		.19
<b>FITTINGS</b>	1	Lot		139.29
<b>WELDS</b>	1	Lot		.23
<b>Material Cost</b>				\$ 482.92
<b>Installation</b>				137.09
<b>TOTAL COST INSTALLED</b>				\$ 620.01
<b>MELISSA, COLLIN COUNTY, TEXAS,</b> <b>LINE E-10</b>				
<b>METER</b> Eaco No. 3, 100 lb. T. Serial No. D-1394 with Eaco Combined FVMT Recording gauge Serial No. 155273, 0 - 100 lbs. Static with 7 day Eaco clock	1	Each	239.7850	\$ 239.79

2426

Form 504 10-58 1-53

## TRANSMISSION SYSTEM MEASURING STATION EQUIPMENT

"E" System

5672

ITEM	QUANTITY	UNIT	UNIT COST	AMOUNT
<b>RAVENNA, FANNIN COUNTY, TEXAS, LINE E-17 (Cont'd)</b>				
<b>NEEDLE VALVES Screwed</b> Lupkenheimer 1/4 in. 125 lb. WP Brass	2	Each	.6293	1.26
<b>PLUG VALVES Flanged</b> Nordstrom				
2 in. 250 lb. CFBO	1	Each	15.4336	15.43
2 in. 250 lb. (50% Ownership)	1	Each	13.5868	6.75
2 in. 250 lb. with CI EH CFBO	2	Each	15.4336	30.87
<b>SAFETY VALVE</b> Crane Angle 2 in. L & W Type	1	Each	5.6714	5.67
<b>PIPE Plain End (Random Lengths)</b>	1	Lot		4.74
<b>HEADER CUSHION</b> 16 x 36 in. with baseball welded ends and 3 - 2 in. openings	1	Each	42.1000	42.10
<b>FITTINGS</b>	1	Lot		31.68
<b>WELDS</b>	1	Lot		19.90
<b>Material Cost</b>				\$ 571.48
<b>Installation</b>				156.65
<b>TOTAL COST INSTALLED</b>				\$ 728.13
<b>PARIS, LAMAR COUNTY, TEXAS, LINE E-18</b>				
<b>METERS</b>				
Foxboro Type 207 Orifice Range 100 in. Differential, 250 lb. Static Serial No. A-69824 Com- pany No. 1077 with 24 hour clock, Chart No. 858049	1	Each	143.1046	143.10
Foxboro Type 105 Differential Recorder, Range 20 in. Differ- ential only, Serial No. A-69567 Company No. 1077-A with 24 hour clock, Chart No. 858050	1	Each	119.9348	119.93
<b>METER PIPING</b> Wide Range Screwed Installation with steel needle valves	1	Set	25.1700	25.17

2427

Form 564 100M 7-63

## TRANSMISSION SYSTEM MEASURING STATION EQUIPMENT

"E" System

5673-5679

ITEM	QUANTITY	UNIT	UNIT COST	AMOUNT
<b>PARIS, LAMAR COUNTY, TEXAS</b>				
<b><u>LINE E-18 (Cont'd)</u></b>				
<b>REGULATORS</b>				
Emco 8 in. balanced valve No. 2811 with 9-1/2 in. diaphragm case 6 bolts flanged	1	Each	379.5000	\$ 379.50
<b>GAUGES</b>				
Indicating Pressure Steel Tube Foxboro BR With 5 in. dial Range 0-500 lbs.	1	Each	4.3114	4.31
<b>GATE VALVES Flanged</b>				
Walworth OS&Y 8 in. 700 lb. T with CI EH CFBO	2	Each	77.0178	154.04
Darling MRS 6 in. 700 lb. No. 72 with CI EH CFBO	4	Each	43.8687	175.47
Chapman OS&Y DD IREM 8 in. 125 lb. WSP No. 59-1/2 with CI EH CFBO	1	Each	45.7228	45.72
<b>GLOBE VALVES Screwed</b>				
Walworth 1/2 in. 125 lb. WP Br.	4	Each	.5689	2.28
<b>HANDLE VALVES Screwed</b>				
Metrie 1/4 in.	1	Each	1.2588	1.26
<b>PIPE Plain End (Random Lengths)</b>	1	Lot		100.88
<b>FITTINGS</b>	1	Lot		102.72
<b>WELDS</b>	1	Lot		124.32
<b>Material Cost</b>				\$ 1,378.70
<b>Installation</b>				356.25
<b>TOTAL COST INSTALLED</b>				\$ 1,734.95

2428

## TRANSMISSION SYSTEM MEASURING STATION EQUIPMENT

"E" System

5680

ITEM	QUANTITY	UNIT	UNIT COST	AMOUNT
<u>FULBRIGHT, RED RIVER COUNTY,</u> <u>TEXAS, LINE E-22-2 (Cont'd)</u>				
PIPE Plain End (Random Lengths)	1	Lot		\$ 4.70
CUSHION 16 x 33 in. baseball welded ends with 3 - 2 in. Tee Welds	1	Each	41.6500	41.65
FITTINGS	1	Lot		19.65
WELDS	1	Lot		20.53
Material Cost				\$ 537.29
Installation				146.76
TOTAL COST INSTALLED				\$ 684.05
<u>GIRLS' STATE TRAINING SCHOOL,</u> <u>GAINESVILLE, COOKE COUNTY, TEXAS,</u> <u>REGULATOR STATION NO. 1, LINE</u> <u>E-4</u>				
REGULATORS Fulton 1 in. HP balanced valve 5-1/2 in. diaphragm, 4 belts screwed	1	Each	18.0550	\$ 18.06
GAUGES Indicating Pressure Crosby ER CI Case With 5 in. dial Range 0-500 lbs.	1	Each	3.7586	3.76
Ashcroft With 5 in. dial Range 0-200 lbs.	1	Each	2.1692	2.17
GATE VALVES Flanged Westcott NRE 2 in. 500 lb. WP with CI EH CYBO	1	Each	15.1383	15.14
2 in. 500 lb. WP	2	Each	13.2115	26.42
SEMI VALVE Screwed Lunkenheimer 1/4 in. 125 lb. VP brass	1	Each	.6293	.63

2429

Form 264 10-58 7-53

## TRANSMISSION SYSTEM MEASURING STATION EQUIPMENT

"E" System

5681

ITEM	QUANTITY	UNIT	UNIT COST	AMOUNT
<b>GIRLS' STATE TRAINING SCHOOL, GAINESVILLE, COOKE COUNTY, TEXAS, REGULATOR STATION NO. 1, LINE E-4 (Cont'd)</b>				
PIPE Threaded and Coupled (Random Lengths)	1	Lot		\$ .98
FITTINGS	1	Lot		17.04
Material Cost				\$ 84.20
Installation				23.91
TOTAL COST INSTALLED				\$ 108.11
<b>GIRLS' STATE TRAINING SCHOOL, GAINESVILLE, COOKE COUNTY, TEXAS, REGULATOR STATION NO. 2, LINE E-4</b>				
REGULATOR Fulton 2 in. HP balanced valve with 9-1/2 in. diaphragm case, screwed	1	Each	54.9600	\$ 54.96
GAUGE Indicating Pressure Crosby Br. case With 5 in. dial Range 0-60lbs.	1	Each	7.0676	7.07
GATE VALVES Screwed Darling 4 in. 1000 lb. T No. 101 LE NRS	3	Each	26.2319	78.70
GLOBE VALVES Screwed Lunkenheimer 1/4 in. Br.	1	Each	.6643	.66
SAFETY VALVES Crane, 2 in. 125 lb. WP L. & W. Type	1	Each	5.6714	5.67
PIPE Plain End (Random Lengths)	1	Lot		2.80
FITTINGS	1	Lot		60.33

2430

## TRANSMISSION SYSTEM MEASURING STATION EQUIPMENT

"E" System

5682-5687

ITEM	QUANTITY	UNIT	UNIT COST	AMOUNT
<b>GIRLS' STATE TRAINING SCHOOL, GAINESVILLE, COOKE COUNTY, TEXAS, REGULATOR STATION NO. 2, LINE E-4 (Cont'd)</b>				
<b>WELDS</b>	1	Lot		\$ 5.98
Material Cost				\$ 216.17
Installation				59.70
<b>TOTAL COST INSTALLED</b>				\$ 275.87
<b>GIRLS' STATE TRAINING SCHOOL, GAINESVILLE, COOKE COUNTY, TEXAS, LINE E-4</b>				
<b>METERS</b>				
Emco No. 4 50 lb. T, Serial No. 5289 with Foxboro PV&T Recording Gauge Serial No. F- 138, 0-50 lb. Static with 7 day Foxboro clock	1	Each	257.0814	\$ 257.08
<b>GATE VALVES Flanged</b>				
Kennedy MRS				
4 in. 125 lb. with CI Std.CFBO	3	Each	15.2188	45.66
Crane OS&Y Wedged				
2 in. 125 lb. with CI Std.CFBO	2	Each	11.0394	22.08
<b>PIPE Threaded and Coupled (Random Lengths)</b>	1	Lot		3.86
<b>FITTINGS</b>	1	Lot		15.10
Material Cost				\$ 343.78
Installation				97.63
<b>TOTAL COST INSTALLED</b>				\$ 441.41
<b>GAINESVILLE JUNCTION, COOKE COUNTY, TEXAS, LINE E</b>				
<b>GRAVITOMETERS</b>				
Acme Recording, Serial No. 111 Range 0.5 to 1.0	1	Each	333.8910	\$ 333.89



2431

Form 754-100M 7-53

## TRANSMISSION SYSTEM MEASURING STATION EQUIPMENT

"T" System

5688

LINE B	ITEM	QUANTITY	UNIT	UNIT COST	AMOUNT
	<b>DENTON, DENTON COUNTY, TEXAS</b>				
	<b>LINE P-1</b>				
	<b>METERS</b>				
	Foxboro Type 207, Orifice Range 100 in. Differential 100 lb. static Serial No. 45601 Com- pany No. 1042 with 24 hour clock Chart 898039	1	Each	139.0256	\$ 139.03
	Foxboro Type 105 Differential Recorder Range 20 in. Differ- ential only, Serial No. A- 81940 Company No. 1042-A with 24 hour clock Chart No. 858050	1	Each	119.9348	119.93
	<b>METER PIPING</b>				
	Wide Range screwed installation with steel needle valves	1	Set	25.1700	25.17
	<b>REGULATORS</b>				
	Fulton 4 in. HP with 7-1/2 in. diaphragm case 4 bolts CFBO	1	Each	122.5890	122.59
	Fulton 6 in. HP with 11 in. diaphragm case Flanged	1	Each	206.1370	206.14
	<b>GAUGES</b>				
	Indicating Pressure				
	Foxboro ER with 5 in. dial CI case Range 0-500 lbs.	1	Each	4.3114	4.31
	Ashcroft ER with 5 in dial CI case Range 0-500 lbs. Range 0-100 lbs.	2	Each	5.7999	11.60
	<b>GATE VALVES Flanged</b>				
	Atwood 6 in. DD NRS 4-P	3	Each	44.6019	133.81
	Crane Wedge OS&Y				
	6 in. 125 lbs. CFBO	2	Each	30.0874	60.17
	2 in. 125 lbs. CFBO	2	Each	11.0394	22.08
	Ludlow 6 in. No. 30 DD NRS CFBO	3	Each	52.2782	156.83
	<b>GATE VALVES Screwed</b>				
	Ludlow 4 in. 185 lb. OW & GMP No. 5 NRS LE DD	1	Each	13.1838	13.18
	<b>NEEDLE VALVES Screwed</b>				
	Lunkenheimer 1/4 in. 125 lbs. WP Brass	1	Each	.6293	.63

2432

## TRANSMISSION SYSTEM MEASURING STATION EQUIPMENT

"Y" System

5689-5694

ITEM	QUANTITY	UNIT	UNIT COST	AMOUNT
<b>DENTON, DENTON COUNTY, TEXAS, LINE F-1 (Cont'd)</b>				
<b>SAFETY VALVES</b>				
Walworth 4 in. 125 lbs. CI L&W type	1	Each	15.7096	\$ 15.71
<b>PIPE (Random Lengths)</b>	1	Lot		53.25
<b>HEADERS</b>				
10 x 54 in. with 2 10 in. flat end welds and 2 6 in. open- ings	2	Each	29.3200	58.64
<b>FITTINGS</b>	1	Lot		181.27
<b>WELDS</b>	1	Lot		45.09
Material Cost				\$ 1,369.43
Installation				376.11
<b>TOTAL COST INSTALLED</b>				<b>\$ 1,745.54</b>
<b>McKINNEY, COLLIN COUNTY, TEXAS, LINE F-2</b>				
<b>METERS</b>				
Foxboro Type C Orifice Range 100 in. Differential 100 lbs. static Serial No. 70752 Company No. 1031 with 24 hour clock Chart No. 89870	1	Each	129.6258	\$ 129.63
Foxboro Type T Differential Recorder Range 20 in. Differ- ential only Serial No. 78320 Company No. 1031-A with 24 hour clock Chart No. 89863	1	Each	106.1254	106.13
<b>METER PIPING</b>				
Wide Range screwed installation with steel needle valves	1	Set	25.1700	25.17
<b>REGULATORS</b>				
Emco 4 in. HP Balanced Valve No. 1053 with 9 in. diaphragm case CFEO	1	Each	158.7412	158.74
Fulton 2 in. HP Balanced Valve with 7-1/4 in. diaphragm case CFEO	1	Each	67.5040	67.50

2433

Form 84-100M-7-59

## TRANSMISSION SYSTEM MEASURING STATION EQUIPMENT

"T" System

5695

ITEM	QUANTITY	UNIT	UNIT COST	AMOUNT
<b>VALLEY VIEW, COOKE COUNTY, TEXAS, LINE F-5 (Cont'd)</b>				
<b>GATE VALVES Flanged</b>				
Walworth 2 in. 700 lbs. T O&Y DD CFBO	1	Each	17.2655	\$ 17.27
<b>GATE VALVES Screwed</b>				
Kennedy 2 in. 125 lbs. WP DD NRS	1	Each	5.1335	5.13
Oil Well Supply 2 in. Wedge IH LE NRS	1	Each	19.0037	19.00
Westcott 2 in. 500 lbs. DD LE NRS	2	Each	12.7711	25.54
<b>NEEDLE VALVES Screwed</b>				
Lunkenheimer 1/4 in. brass	2	Each	.6293	1.26
Metric 1/4 in.	1	Each	1.2588	1.26
<b>SAFETY VALVES</b>				
No name 2 in. LAW type	1	Each	5.6714	5.67
<b>PIPE Threaded and Coupled (Random Lengths)</b>				
	1	Lot		6.24
<b>CUSHIONS</b>				
12 x 50 in. with 2 baseball welded ends 2 1-1/4 in. openings and 1 1/4 in. welded collar	1	Each	31.9800	31.98
<b>FITTINGS</b>	1	Lot		19.48
<b>WELDS</b>	1	Lot		6.19
<b>Material Cost</b>				\$ 294.64
<b>Installation</b>				81.92
<b>TOTAL COST INSTALLED</b>				\$ 376.56
<b>VALLEY VIEW, COOKE COUNTY, TEXAS, LINE F-5</b>				
<b>METERS</b>				
Emco No. 4 500 lb. T Serial No. 9264 with Foxboro combined PV&T recording gauge Serial No. F-240 0-100 lbs. static with 7 day Foxboro clock	1	Each	406.7500	\$ 406.75

## TRANSMISSION SYSTEM MEASURING STATION EQUIPMENT

"F" System

5696-5704

ITEM	QUANTITY	UNIT	UNIT COST	AMOUNT
<b>VALLEY VIEW, COOKE COUNTY, TEXAS, LINE F-5 (Cont'd)</b>				
<b>GATE VALVES Flanged</b>				
Crane DD OSEY				
2 in. 1000 lbs. T CFBO	4	Each	19.3618	\$ 77.45
2 in. 1000 lbs. T CFBO (50% ownership)	1	Each	19.3618	9.68
<b>PIPE Threaded and Coupled ( Random Lengths)</b>	1	Lot		1.59
<b>FITTINGS</b>	1	Lot		16.51
<b>WELDS</b>	1	Lot		1.43
Material Cost				\$ 513.41
Installation				145.40
<b>TOTAL COST INSTALLED</b>				\$ 658.81
<b>LEWISVILLE, DENTON COUNTY, TEXAS, LINE F-6</b>				
<b>METERS</b>				
Emco No. 4 500 lb. T Serial No. .7511 with Wylie combined PV&T recording gauge, Serial No. 1904 0-76 lbs. static with Foxboro 7 day clock	1	Each	471.9596	\$ 471.96
<b>REGULATORS</b>				
Fulton 1-1/4 in. HP Balanced Valve with 5-1/4 in. diaphragm, 4 bolt case Screwed	1	Each	22.1000	22.10
Emco 2 in. HP Balanced Valve with 12 in. diaphragm case 6 bolt No. 4589 Flanged	1	Each	87.7250	87.73
<b>GAUGES</b>				
Indicating Pressure				
Crosby HR with 5 in. dial CI case				
Range 0-250 lbs.	1	Each	3.7586	3.76
Range 0-500 lbs.	1	Each	3.7586	3.76
<b>GATE VALVES Flanged</b>				
Walworth ID OSEY				
2 in. 125 lbs.	3	Each	8.9703	26.91
2 in. 700 lbs. T	4	Each	15.3387	61.35
2 in. 700 lbs. T (50% Ownership)	1	Each	15.3387	7.67
2 in. 700 lbs. T	3	Each	15.3387	46.01

2435

Form 344-100M-7-52

## TRANSMISSION SYSTEM MEASURING STATION EQUIPMENT

"F" System

5705

ITEM	QUANTITY	UNIT	UNIT COST	AMOUNT
<b>GRAPEVINE, TARRANT COUNTY, TEXAS, LINE F-11 (Cont'd)</b>				
<b>FITTINGS</b>	1	Lot		\$ 30.72
<b>WELDS</b>	1	Lot		30.52
Material Cost				\$ 1,073.64
Installation				296.24
<b>TOTAL COST INSTALLED</b>				<b>\$ 1,369.88</b>
<b>ACME BRICK COMPANY, 1 MILE SOUTH DENTON, DENTON COUNTY, TEXAS, LINE F-8</b>				
<b>METERS</b>				
Foxboro Type C Orifice Range 100 in. Differential 250 lb. static Serial No. 60285 Company No. 1047 with 24 hour clock Chart No. 85840	1	Each	133.5948	\$ 133.59
<b>METER PIPING</b>				
Single Welded installation for Flange connection meter	1	Set	27.5400	27.54
<b>GATE VALVES Flanged</b>				
Crane 4 in. 125 lbs. WP Wedge OS&Y CFB	4	Each	32.3367	129.35
<b>PIPE Plain End (Random Lengths)</b>	1	Lot		18.15
<b>HEADERS</b>				
6 in. x 4 ft. 2 in. with Orange Peel welded ends, 3 4 in. welded openings	2	Each	23.2900	46.58
<b>FITTINGS</b>	1	Lot		19.01
<b>WELDS</b>	1	Lot		5.98
Material Cost				\$ 380.20
Installation				106.28
<b>TOTAL COST INSTALLED</b>				<b>\$ 486.48</b>

2436

## TRANSMISSION SYSTEM MEASURING STATION EQUIPMENT

"P" System

5706-5713

ITEM	QUANTITY	UNIT	UNIT COST	AMOUNT
<b>ACME BRICK COMPANY, 5 MILES EAST DENTON, DENTON COUNTY, TEXAS, LINE F-8</b>				
<b>REGULATORS</b>				
Fulton 2 in. HP Balanced Valve with 7-1/4 in. diaphragm case Screwed	1	Each	54.9600	54.96
Hercules 1 in. HP Service Screwed	1	Each	8.3400	8.34
<b>GAUGES</b>				
Indicating Pressure Foxboro 1/4 in. HR with 5 in. dial Range 0-500 lbs.	1	Each	4.3114	4.31
<b>GATE VALVES Flanged</b>				
Ludlow 4 in. No. 8 HRS	3	Each	35.2632	105.79
Westcott 4 in. 250 lbs. WP	1	Each	21.8994	21.90
<b>GATE VALVES Screwed</b>				
Darling 6 in. 700 lbs. T DD HRS	1	Each	36.9966	37.00
<b>NEEDLE VALVES Screwed</b>				
Crane 1/4 in. 125 lbs. WP Brass	1	Each	.4838	.48
<b>SAFETY VALVES Screwed</b>				
Crane 4 in. 125 lbs. WP LSW type CI	1	Each	15.7096	15.71
<b>PIPE (Random Lengths)</b>				
	1	Lot		7.69
<b>FITTINGS</b>				
	1	Lot		48.32
<b>WELDS</b>				
	1	Lot		6.86
Material Cost				\$ 311.36
Installation				86.48
<b>TOTAL COST INSTALLED</b>				<b>\$ 397.84</b>
<b>IRVING COMPRESSING STATION, DALLAS COUNTY, TEXAS, LINE F</b>				
<b>REGULATORS</b>				
Emco 8 in. HP Balanced Valve No. 1047 with 8 in. diaphragm case 6 belts Flanged CF80	1	Each	387.2906	387.29



## TRANSMISSION SYSTEM MEASURING STATION EQUIPMENT

"G" System

5714-5732

ITEM	QUANTITY	UNIT	UNIT COST	AMOUNT
<b>ST. JOE, MONTAGUE COUNTY, TEXAS</b>				
<b>LINE G-3</b>				
<b>METERS</b>				
Emco No. 4, 500 lbs. T Serial No. 4593, with Foxboro combined PV&T recording gauge, Serial No. F-270, 0-100 lbs. Static, 7-day Foxboro clock	1	Each	406.7500	406.75
<b>REGULATORS</b>				
Fulton 1-1/4 in. high pressure with 5 in. diaphragm, 4 bolts, screw	1	Each	22.1000	22.10
Emco 4 in. high pressure balanced, Valve No. 5095, with 11 in. diaphragm, 6 bolts Flanged	1	Each	155.2250	155.23
<b>GAUGES</b>				
Indicating Pressure Crosby Brass Rim, 5 in. Dial 0-250 lbs.	1	Each	3.7586	3.76
0-500 lbs.	1	Each	3.7586	3.76
<b>GATE VALVES Flanged</b>				
Crane No. 22 DD OS&Y 4 in. 250 lbs. WP	1	Each	28.8205	28.82
Crane OS&Y 2 in. 250 lbs. WP	1	Each	15.3181	15.32
P & C Co. Wedge OS&Y 4 in. 250 lbs. WP	5	Each	41.1230	205.62
Walworth OS&Y 4 in. 250 lbs. WP	1	Each	42.8234	42.82
<b>GATE VALVES Screwed</b>				
Lunkheimer 1/4 in. Brass	1	Each	1.0941	1.09
<b>NEEDLE VALVES Screwed</b>				
Walworth 1/4 in. 125 lbs. WP Brass	1	Each	.4838	.48
<b>PLUG VALVES Flanged</b>				
Nordstrom Straightway 4 in. 250 lbs. WP	3	Each	42.3686	127.11
4 in. 250 lbs. WP (50% Ownership)	1	Each	42.3686	21.18
<b>SAFETY VALVES</b>				
Crane 2 in. No. 27, 125 lbs. WP L&W	1	Each	5.6714	5.67

## TRANSMISSION SYSTEM MEASURING STATION EQUIPMENT

"0" System

5733-5741

ITEM	QUANTITY	UNIT	UNIT COST	AMOUNT
<b>EMPIRE OIL AND REFINING COMPANY</b> <b>GAINESVILLE, COCKER COUNTY, TEXAS,</b> <b>LINE 6-1</b>				
<b>METERS</b>				
Foxboro Type 207 Orifice Range 100 in. differential 500 lbs. Static, Serial No. A-39588 Company No. 1045 with 24 hour Clock Chart No. 898040	1	Each	150.7780	\$ 150.78
Foxboro Type 105 differential recorder range 20 in. differ- ential only, Serial No. A- 81924 Company No. 1045-A with 24 hour clock Chart No. 858050	1	Each	119.9348	119.93
<b>METER PIPING</b> Wide Range welded Installation with Steel Valves				
	1	Set	30.5400	30.54
<b>GATE VALVES</b> Flanged Kennedy 4 in. No. 76 NRS NH GFWO				
	4	Each	40.1951	160.78
<b>PIPE</b> Plain End (Random Lengths)				
	1	Lot		13.32
<b>FITTINGS</b>				
	1	Lot		20.89
<b>WELDS</b>				
	1	Lot		13.73
<b>Material Cost</b>				\$ 509.97
<b>Installation</b>				140.93
<b>TOTAL COST INSTALLED</b>				\$ 650.90
<b>DIXIE JUNCTION, STEPHENS COUNTY,</b> <b>OKLAHOMA LINE 6A</b>				
<b>METERS</b>				
Foxboro Type C Orifice Range 100 in. differential 500 lbs. Static Serial No. 71323 Com- pany No. 25 with 24 hour clock Chart No. 85828	1	Each	141.2682	\$ 141.27
Foxboro Type T Differential Recorder range 20 in. differ- ential only Serial No. 60267 Company No. 25-A with 24 hour clock Chart No. 89863	1	Each	106.1254	106.13

## TRANSMISSION SYSTEM MEASURING STATION EQUIPMENT

"H" System

5742-5749

ITEM	QUANTITY	UNIT	UNIT COST	AMOUNT
<b>BYERS, CLAY COUNTY, TEXAS,</b>				
<b><u>LINE H-1</u></b>				
<b>METERS</b>				
Emco No. 4 500 lb. T Serial No. 4602 with Wylie Combined PYMT Recording Gauge Serial No. 2690 0-350 lbs. static with 7 day Foxboro clock	1	Each	471.9596	\$ 471.96
<b>GATE VALVES Flanged</b>				
Crane 2 in. 1000 lb. T DD OS&Y with NH CI CFBO	5	Each	19.3618	96.81
<b>PIPE Threaded and Coupled (Random Lengths)</b>				
	1	Lot		1.85
<b>FITTINGS</b>				
	1	Lot		22.91
Material Cost				\$ 592.63
Installation				168.11
<b>TOTAL COST INSTALLED</b>				<b>\$ 760.94</b>
<b>BYERS, CLAY COUNTY, TEXAS,</b>				
<b><u>LINE H-1</u></b>				
<b>REGULATORS</b>				
Fulton 1 in. HP 3-1/2 in. diaphragm case 4 bolts No. B-81 screwed	1	Each	18.0550	\$ 18.06
<b>GATE VALVES Flanged</b>				
Crane DD OS&Y				
2 in. 1000 lb. T	1	Each	17.4350	17.44
2 in. 1000 lb. T with NH CI CFBO	3	Each	19.3618	58.09
<b>PIPE Threaded and Coupled (Random Lengths)</b>				
	1	Lot		.72
<b>FITTINGS</b>				
	1	Lot		5.91
Material Cost				\$ 100.22
Installation				25.46
<b>TOTAL COST INSTALLED</b>				<b>\$ 128.68</b>

2440

## TRANSMISSION SYSTEM MEASURING STATION EQUIPMENT

"H" System

5750-5758

ITEM	QUANTITY	UNIT	UNIT COST	AMOUNT
<b>STATION 0 PLUS 04.5, COTTON COUNTY, OKLAHOMA, LINE - 2ND H SERVICE</b>				
<b>REGULATORS</b>				
Fulton 1-1/4 in. HP 7-1/2 in. diaphragm case 4 bolts screwed	1	Each	22.1000	\$ 22.10
<b>GATE VALVES Screwed</b>				
Westcott 2 in. 800 lb. WP DD NRS	4	Each	19.4032	77.61
<b>FITTINGS</b>				
	1	Lot		3.66
Material Cost				\$ 103.37
Installation				28.94
TOTAL COST INSTALLED				\$ 132.31
<b>MERRICK AND GOLDSMITH, NEAR PETROLIA, CLAY COUNTY, TEXAS, LINE H AND H-2</b>				
<b>METERS</b>				
Tebay No. 2 Serial No. 397649	1	Each	25.0060	\$ 25.01
<b>REGULATORS</b>				
Emco 1 in. LP Service Screwed	1	Each	4.8600	4.86
Hercules 1 in. HP Screwed	1	Each	8.3400	8.34
<b>GATE VALVES Screwed</b>				
Darling 2 in. 1000 lb. T No. 101 IRPM DD NRS	1	Each	13.1367	13.14
Walworth 1 in. 250 lb. WP NRS brass	1	Each	4.1410	4.14
<b>FITTINGS</b>				
	1	Lot		2.19
Material Cost				\$ 57.68
Installation				16.38
TOTAL COST INSTALLED				\$ 74.06

2441

Form 304 10-55 7-55

## TRANSMISSION SYSTEM MEASURING STATION EQUIPMENT

"J" System

5759

d v	ITEM	QUANTITY	UNIT	UNIT COST	AMOUNT
	<b>AVENUE E, TARRANT COUNTY, TEXAS</b>				
	<b>LINE J</b>				
	<b>REGULATORS</b>				
	Emco 1-1/4 in. Type B Service screwed	2	Each	13.6000	\$ 27.20
	Fulton 1-1/4 in. HP with 7-1/4 in. diaphragm case screwed	1	Each	22.1000	22.10
	<b>PIPE Threaded and Coupled</b> (Random Lengths)	1	Lot		.89
	<b>FITTINGS</b>	1	Lot		3.00
	<b>WELDS</b>	1	Lot		8.14
	Material Cost				\$ 61.33
	Installation				15.11
	<b>TOTAL COST INSTALLED</b>				\$ 76.44
	<b>FOREST HILL, TARRANT COUNTY, TEXAS</b>				
	<b>LINE J</b>				
	<b>METERS</b>				
	Emco No. 2-1/2 500 lb. T Serial No. 2711 with Foxboro PV&T Recording Gauge Serial No. F-363 0-100 lbs. static with 7 day Foxboro clock	1	Each	209.5530	\$ 209.55
	<b>REGULATORS</b>				
	Fulton 1-1/2 in. HP with 12 in. diaphragm case 4 bolts screwed	1	Each	26.2700	26.27
	<b>GADGES</b>				
	Indicating Pressure Foxboro Brass Rim CI Case Model J Steel Tube with 5 in. dial Range 0-500 lbs.	1	Each	12.2788	12.28
	<b>GATE VALVES Flanged</b>				
	Crane OS&Y				
	2 in. 125 lb. WP Wedge with CI Std. CFBO	3	Each	10.3895	31.17
	2 in. 700 lb. T DD	1	Each	15.3181	15.32
	2 in. 700 lb. T DD with KH CI CFBO	3	Each	17.2449	51.73

2442

## TRANSMISSION SYSTEM MEASURING STATION EQUIPMENT

"J" System

5760

ITEM	QUANTITY	UNIT	UNIT COST	AMOUNT
<b>FOREST HILL, TARRANT COUNTY, TEXAS</b>				
<b>LINE J (Cont'd)</b>				
<b>GATE VALVES Flanged (Cont'd)</b>				
Darling 2 in. 700 lb. T No. 72 DD NRS with KH CI CWBO	1	Each	14.0514	\$ 14.05
<b>GATE VALVES Screwed</b>				
Walworth 2 in. 700 lb. T DD OS&Y	1	Each	14.9086	14.91
<b>GLOBE VALVES Screwed</b>				
Crane 3/8 in. 125 lb. WP brass	1	Each	.4364	.44
<b>PIPE Threaded and Coupled</b>				
(Random Lengths)	1	Lot		1.94
<b>FITTINGS</b>				
	1	Lot		34.15
<b>WELDS</b>				
	1	Lot		.80
<b>Material Cost</b>				\$ 412.61
<b>Installation</b>				116.95
<b>TOTAL COST INSTALLED</b>				\$ 529.56
<b>HAINES, TARRANT COUNTY, TEXAS</b>				
<b>LINE J AND J-2</b>				
<b>METERS</b>				
Westcott Orifice Taylor Case range 100 in. differential and static with 24 hour clock Serial No. 28169 Company No. 42	1	Each	130.3262	\$ 130.33
Westcott Orifice Taylor Case range 100 in. differential and static with 24 hour clock Serial No. 25519 Company No. 43	1	Each	130.3262	130.33
Foxboro Type C Orifice range 100 in. differential 500 lbs. static with 24 hour clock Chart No. 85828 Serial No. 60156 Company No. 83	1	Each	141.2682	141.27
<b>METER PIPING</b>				
Single screwed installation with steel needle valves throughout	3	Sets	23.1700	69.51



## TRANSMISSION SYSTEM MEASURING STATION EQUIPMENT

5761

"J" System

ITEM	QUANTITY	UNIT	UNIT COST	AMOUNT
<b>HAINES, TARRANT COUNTY, TEXAS</b> <b>LINE J AND J-2</b>				
<b>REGULATORS</b>				
Emco 1 in. Service screwed	1	Each	4.8600	4.86
Fulton 8 in. MP with 11 in. diaphragm case 8 bolts with EM CI CFBO	1	Each	307.4100	307.41
Fulton 12 in. MP with 11 in. diaphragm case 12 bolts Flanged	1	Each	614.5130	614.51
<b>GAUGES</b>				
Indicating Pressure				
Foxboro ER with 5 in. dial	1	Each	4.3114	4.31
Range 0-500 lbs.	1	Each	4.3114	4.31
Range 0-250 lbs.				
Recording Pressure				
Bristol 9 in. Serial No. B-6279				
Chart No. 2035 Company No.				
166 with 24 hour clock	1	Each	34.9232	34.92
Range 0-60 lbs.				
<b>AUTOMATIC RELIEF VALVES Flanged</b>				
Fulton MP 8 in. differential				
18 in. diaphragm head 8 bolts with EM CI CFBO	1	Each	494.4900	494.49
<b>GATE VALVES Flanged</b>				
Atwood 12 in. 1600 lb. T No.				
5-P NRS Brass Stem	3	Each	339.2820	1,017.85
Crane 8 in. 250 lb. WP ND				
NRS Brass Stem with EM CI CFBO	1	Each	63.7342	63.73
Darling NRS Brass Stem				
8 in. 1000 lb. T No. 102				
ND with EM CI CFBO	3	Each	76.3652	229.10
3 in. 700 lb. T No. 72				
with EM CI CFBO	1	Each	21.4376	21.44
Kennedy 8 in. 125 lb. WP NRS				
Brass Stem with CI Std. CFBO	4	Each	37.3656	149.46
Ludlow NRS Brass Stem				
8 in. 1000 lb. T No. 30 ND				
with EM CI CFBO	1	Each	79.8068	79.81
6 in. No. 8 with EM CI CFBO	1	Each	85.2998	85.30
<b>GATE VALVES Screwed</b>				
Darling 4 in. 1000 lb. T				
No. 101 NRS Brass Stem	1	Each	26.2319	26.23

2444

## TRANSMISSION SYSTEM MEASURING STATION EQUIPMENT

"J" System

5762

ITEM	QUANTITY	UNIT	UNIT COST	AMOUNT
<b>HAINES, TARRANT COUNTY, TEXAS</b> <b>LINE J AND J-2</b>				
<b>GLOBE VALVES</b> Screwed Crescent Brass Std. 3/8 in.	1	Each	.7013	.70
1/4 in.	1	Each	.6176	.62
<b>SAFETY VALVES</b> Screwed Crane 3 in. 125 lb. WP LNW Type	1	Each	14.9831	14.98
<b>PIPE</b> Threaded and Coupled (Random Lengths)	1	Lot		139.35
<b>HEADERS</b> 12 in. x 5 ft. 7 in. with 2 - 8 in. openings and 1 - 10 in. opening and flat welded ends	2	Each	43.1400	86.28
<b>FITTINGS</b>	1	Lot		466.31
<b>WEIDS</b>	1	Each	4.3880	4.39
Material Cost				\$ 4,322.80
Installation				1,226.43
<b>TOTAL COST INSTALLED</b>				\$ 5,549.23
<b>LOME STAR GAS COMPANY - 50% OWNERSHIP</b>				\$ 2,774.62
<b>BOUNDARY NO. 2, DALLAS COUNTY, TEXAS, LINE J-2</b>				
<b>METERS</b> Westcott Orifice Bristol Case 100 in. differential and static with 24 hour clock Serial No. 10415 Company No. 1211	1	Each	130.3262	\$ 130.33
Westcott Orifice Bristol Case 100 in. differential and static with 24 hour clock Serial No. 10418 Company No. 1212	1	Each	130.3262	130.33

2445

Form 354 10-55 7-55

## TRANSMISSION SYSTEM MEASURING STATION EQUIPMENT

"J" System

5763

ITEM	QUANTITY	UNIT	UNIT COST	AMOUNT
<b>BOUNDARY NO. 2, DALLAS COUNTY, TEXAS, LINE J-2 (Cont'd)</b>				
<b>METERS (Cont'd)</b>				
Westcott Orifice Bristol Case 100 in. differential and static with 24 hour clock Serial No. 10416 Company No. 1213	1	Each	130.3262	\$ 130.33
Foxboro Type 105 Differential Recorder range 20 in. differ- ential only with 24 hour clock Chart No. 858050 Serial No. 10427 Company No. 1211-A	1	Each	119.9348	119.93
Foxboro Type 105 Differential Recorder range 20 in. differ- ential only with 24 hour clock Chart No. 858050 Serial No. 10423 Company No. 1212-A	1	Each	119.9348	119.93
Foxboro Type 105 Differential Recorder range 20 in. differ- ential only with 24 hour clock Chart No. 858050 Serial No. 10422 Company No. 1213-A	1	Each	119.9348	119.93
<b>METER PIPING</b>				
Wide range screwed installation with steel needle valves	3	Sets	25.1700	75.51
<b>GRAVITOMETERS</b>				
Acme 52 x 30 x 22 in. range 15 to 1.0 Serial No. 137 Chart No. 110	1	Each	333.8910	333.89
<b>REGULATORS</b>				
Emco 1 in. Type B Service screwed	1	Each	4.8600	4.86
Fulton 8 in. HP with 10-1/2 in. diaphragm case 8 bolts with CI Std. CFBO	1	Each	307.4100	307.41
Hercules 1 in. HP screwed	1	Each	8.3400	8.34
<b>GAUGES</b>				
Recording Pressure Bristol 12 in. Aluminum Rim CI Case Chart No. 2083 with 7 day clock	1	Each	44.9105	44.91
Foxboro CI Rim and Case 10 in. with 7 day clock Serial No. 858792 Chart No. 79977 Range 0-500 lbs.	1	Each	46.5752	46.58

## TRANSMISSION SYSTEM MEASURING STATION EQUIPMENT

5764

"J" System

Form 284 100M 7-69

ITEM	QUANTITY	UNIT	UNIT COST	AMOUNT
<b>BOUNDARY NO. 2, DALLAS COUNTY, TEXAS, LINE J-2 (Cont'd)</b>				
<b>AUTOMATIC RELIEF VALVES Flanged Fulton 8 in. differential with 11 in. diaphragm head 8 bolts</b>	1	Each	494.4900	\$ 494.49
<b>GATE VALVES Flanged Westcott 8 in. 500 lb. WP Brass Stem OS&amp;Y with KH CI LE CFBO</b>	9	Each	89.3948	804.55
<b>GATE VALVES Screwed Crane 4 in. 125 lb. WP Brass Stem Wedge MRS</b>	1	Each	9.8847	9.88
<b>GLOBE VALVES Screwed Valworth 3/8 in. 125 lb. WP Brass</b>	6	Each	.4364	2.62
<b>NEEDLE VALVES Screwed Lunkenheimer Brass 1/4 in. 200 lb. WP</b>	1	Each	.6293	.63
<b>1/8 in. 200 lb. WP</b>	2	Each	.5922	1.18
<b>Metric Angle 1/4 in. Std.</b>	1	Each	1.2588	1.26
<b>PIPE Threaded and Coupled (Random Lengths)</b>	1	Lot		68.75
<b>PIPE Plain End (Random Lengths)</b>	1	Lot		9.04
<b>PEADERS</b>				
<b>10 in. x 8 ft. 11 in. with one end pointed end welded and one end threaded with 10 x 17-1/2 in. blind flange CI KH; 4 - 8 in. welded openings</b>	1	Each	60.8100	60.81
<b>10 in. x 8 ft. 11 in. with one end orange peel welded and one end threaded with 10 x 17-1/2 in. blind flange CI KH, 10 in. skinner pipe joint clamp, 5 - 8 in. 1 - 4 in. and 1 - 3/8 in. welded openings and 1 - 1 in. welded collar</b>	1	Each	86.1100	86.11
<b>FITTINGS</b>	1	Lot		286.22

2447

Form 284 1000 7-54

## TRANSMISSION SYSTEM MEASURING STATION EQUIPMENT

"J" System

5765-5770

ITEM	QUANTITY	UNIT	UNIT COST	AMOUNT
<b>BOUNDARY NO. 2, DALLAS COUNTY, TEXAS, LINE J-2 (Cont'd)</b>				
<b>WELDS</b>	1	Lot		\$ 40.74
Material Cost				\$ 3,438.56
Installation				964.98
<b>TOTAL COST INSTALLED</b>				<b>\$ 4,403.54</b>
<b>MASONIC HOME, ARLINGTON, TARRANT COUNTY, TEXAS, LINE J-2</b>				
<b>METERS</b>				
Emco No. 2-1/2 500 lb. T Serial No. 2705 with Foxboro PVAT Recording Gauge 0-250 lbs. static Serial No. P-357 with 7 day Foxboro clock	1	Each	209.5530	\$ 209.55
<b>GATE VALVES Flanged</b>				
Crane OS&Y				
4 in. 250 lb. WP with KH CI IE CFBO	1	Each	32.3367	32.34
2 in. 125 lb. WP Wedge with CI Std. CFBO	5	Each	11.0394	55.20
<b>PIPE Threaded and Coupled (Random Lengths)</b>	1	Lot		1.20
<b>FITTINGS</b>	1	Lot		25.22
<b>WELDS</b>	1	Lot		2.27
Material Cost				\$ 325.78
Installation				91.88
<b>TOTAL COST</b>				<b>\$ 417.66</b>
<b>WEST HANLEY, TARRANT COUNTY, TEXAS LINE J-2-1</b>				
<b>METERS</b>				
Emco No. 3 100 lb. T Serial No. 6420 with Foxboro PVAT Recording Gauge Serial No. P-324 0-50 lbs. static with 7 day Foxboro clock	1	Each	229.700	229.70

2448

## TRANSMISSION SYSTEM MEASURING STATION EQUIPMENT

"J" System

5771-5778

ITEM	QUANTITY	UNIT	UNIT COST	AMOUNT
<b>FISHERBURN, DALLAS COUNTY, TEXAS</b> <b>LINE J-2-5</b>				
<b>FITTINGS</b>	1	Lot		\$ 16.02
Material Cost				\$ 324.88
Installation				92.27
<b>TOTAL COST INSTALLED</b>				<b>\$ 417.15</b>
<b>ARCADIA PARK, DALLAS COUNTY, TEXAS</b> <b>LINE J-2-6</b>				
<b>METERS</b>				
Emco No. 2-1/2 500 lb. T Serial No. 2770 with Foxboro PV&T Recording Gauge Serial No. F-375 0-250 lbs. static with 7 day Foxboro clock	1	Each	209.5530	\$ 209.55
<b>GATE VALVES Flanged</b>				
Crane 2 in. 1000 lb. T DD OS&Y with RH CI CFBO	5	Each	19.3618	96.81
<b>PIPE Threaded and Coupled</b> (Random Lengths)	1	Lot		2.94
<b>FITTINGS</b>	1	Lot		22.85
Material Cost				\$ 332.15
Installation				94.33
<b>TOTAL COST INSTALLED</b>				<b>\$ 426.48</b>
<b>CENTRAL HANDLEY, TARRANT COUNTY, TEXAS, LINE J-2-7</b>				
<b>METERS</b>				
Emco No. 4 500 lb. T Serial No. 5890 with Wylie PV&T Record- ing Gauge Serial No. 1501 0-76 lbs. static with 7 day Foxboro clock	1	Each	471.9596	\$ 471.96



2449

Form 204 10-20 1-55

## TRANSMISSION SYSTEM MEASURING STATION EQUIPMENT

"J" System

5779

d v	ITEM	QUANTITY	UNIT	UNIT COST	AMOUNT
	<u>BIRDVILLE, TARRANT COUNTY, TEXAS</u> <u>LINE J-7 (Cont'd)</u>				
	PIPE Threaded and Coupled (Random Lengths)	1	Lot		\$ .88
	PIPE Plain End (Random Lengths)	1	Lot		1.41
	FITTINGS	1	Lot		21.29
	WELDS	1	Lot		15.33
	Material Cost				\$ 189.04
	Installation				49.34
	TOTAL COST INSTALLED				\$ 238.38
	<u>SOUTH FORT WORTH, TARRANT COUNTY,</u> <u>TEXAS, LINE J-8</u>				
	<u>METERS</u>				
	Foxboro Type 207 Orifice range 100 in. differential 100 lbs. static with 24 hour clock Chart No. 899039 Serial No. A-8297 Company No. 1131	1	Each	139.0256	\$ 139.03
	Foxboro Type 207 Orifice range 100 in. differential 100 lbs. static with 24 hour clock Chart No. 898039 Serial No. A-8292 Company No. 1132	1	Each	139.0256	139.03
	Foxboro Type 105 Differential Recorder range 20 in. differ- ential only with 24 hour clock Chart No. 858050 Serial No. A-8285 Company No. 1131-A	1	Each	119.9348	119.93
	Foxboro Type 105 Differential Recorder range 20 in. differ- ential only with 24 hour clock Chart No. 858050 Serial No. A-8283 Company No. 1132-A	1	Each	119.9348	119.93
	<u>METER PIPING</u>				
	Wide Range screwed installation with steel needle valves	2	Sets	25.1700	50.34

2450

## TRANSMISSION SYSTEM MEASURING STATION EQUIPMENT

"J" System

5780

ITEM	QUANTITY	UNIT	UNIT COST	AMOUNT
<b>SOUTH FORT WORTH, TARRANT COUNTY, TEXAS, LINE J-8 (Cont'd)</b>				
<b>REGULATORS</b>				
Emco 8 in. HP Balanced Valve Serial No. 3519 with 9-3/4 in. diaphragm case 6 bolts flanged	1	Each	379.5000	\$ 379.50
Emco 8 in. HP Balanced Valve Serial No. 3539 with 11 in. diaphragm case 6 bolts flanged	1	Each	379.5000	379.50
<b>GAUGES</b>				
Indicating Pressure American S&B Co. HR CI Case with 2-1/2 in. dial Range 0-15 lbs.	1	Each	1.6548	1.65
Foxboro HR CI Case with 5 in. dial Range 0-500 lbs.	1	Each	4.3114	4.31
Range 0-100 lbs. Model A	1	Each	4.3114	4.31
Recording Pressure Bristol 8 in. Model 11 Aluminum Case Serial No. 136280 Chart No. 2035 with 24 hour clock Range 0-60 lbs.	1	Each	34.9232	34.92
<b>AUTOMATIC RELIEF VALVES Flanged</b>				
Fulton 10 in. Differential HP Rolling Weight Type with 18 in. diaphragm case 10 bolts	1	Each	711.1700	711.17
<b>GATE VALVES Flanged</b>				
Crane OS&Y				
10 in. 175 lb. WP Wedge Steel Stem with KH CI LE CFBO	1	Each	100.8140	100.81
10 in. 175 lb. WP Wedge Bronze Stem with KH CI LE CFBO	1	Each	109.9469	109.95
10 in. 175 lb. WP Wedge Bronze Stem	1	Each	97.8889	97.89
8 in. 700 lb. T DD	2	Each	69.0212	138.04
8 in. 700 lb. T DD with KH CI LE CFBO	7	Each	76.8118	537.68
<b>GATE VALVES Screwed</b>				
Lunkenheimer 1/4 in. 150 lb. WP Brass	1	Each	1.6941	1.69
Ohio Brass 1/4 in. 125 lb. WP Brass RB	1	Each	.5701	.57

2451

Form 131-100M-7-63

## TRANSMISSION SYSTEM MEASURING STATION EQUIPMENT

"J" System

5781

d k	ITEM	QUANTITY	UNIT	UNIT COST	AMOUNT
	<u>SOUTH FORT WORTH, TARRANT COUNTY, TEXAS, LINE J-8 (Cont'd)</u>				
	GLOBE VALVES Flanged Crane Angle 10 in. 175 lb. WP OS&Y Steel Stem with KH CI IN CFBO	3	Each	120.6410	\$ 361.92
	GLOBE VALVES Screwed Jenkins 3/8 in. Std. Brass	2	Each	.9044	1.81
	Walworth 3/8 in. Std. Brass	3	Each	.4364	1.31
	NEEDLE VALVES Screwed Lunkenheimer 1/4 in. 200 lb. WP Brass	2	Each	.6293	1.26
	PIPE Threaded and Coupled (Random Lengths)	1	Lot		169.11
	PIPE Plain End (Random Lengths)	1	Lot		16.40
	CUSHIONS 16 in. x 68 ft. with one end orange peel welded and one end baseball welded with 1 - 12 in. welded opening	1	Each	65.1200	65.12
	HEADERS 12 in. x 10 ft. 4 in. with base- ball welded ends with 5 - 8 in. welded openings and 1 - 1/4 in. collar welded on	1	Each	67.3200	67.32
	12 in. x 10 ft. 4 in. with base- ball welded ends with 3 - 10 in. and 2 - 8 in. welded open- ings and 1 - 1 in. and 1 - 1/4 in. collars welded on	1	Each	73.6900	73.69
	12 in. x 10 ft. 4 in. with base- ball welded ends with 3 - 10 in. and 1 - 12 in. welded open- ings	1	Each	71.5400	71.54
	WATER COLUMN Acme 100 in. Complete with Regulator	1	Each	154.1760	154.18
	FITTINGS	1	Lot		267.41

## TRANSMISSION SYSTEM MEASURING STATION EQUIPMENT

"J" System

5782-5791

ITEM	QUANTITY	UNIT	UNIT COST	AMOUNT
<u>SOUTH FORT WORTH, TARRANT COUNTY,</u> <u>TEXAS, LINE J-8 (Cont'd)</u>				
WELDS	1	Lot		\$ 51.37
Material Cost				\$ 4,372.09
Installation				1,227.09
TOTAL COST INSTALLED				\$ 5,599.18
LOVE STAR GAS COMPANY - 50% OWNERSHIP				\$ 2,799.59
<u>GIPFORD HILL GRAVEL COMPANY,</u> <u>DALLAS COUNTY, TEXAS, LINE J-2</u>				
MET.				
Emco No. 4 500 lb. T Serial No. 5700 with Wylie PV&T Recording Gauge Serial No. 1696 0-350 lbs. static with 7 day Foxboro clock	1	Each	471.9596	\$ 471.96
Emco No. 4 500 lb. T Serial No. 5097 with Wylie PV&T Recording Gauge Serial No. 2605 0-350 lbs. static with 7 day Foxboro clock	1	Each	471.9596	471.96
GAUGES				
Indicating Pressure Ashcroft BR CI Case with 4-1/2 in. dial Range 0-200 lbs.	1	Each	1.8740	1.87
REGULATORS				
Fulton 1 in. HP with 5-1/2 in. diaphragm case 4 bolts screwed	1	Each	18.0550	18.06
GATE VALVES Flanged				
Kennedy Brass Stem OS&Y 2 in. 125 lb. WP	1	Each	10.0615	10.06
2 in. 125 lb. WP with CI Std. CFBO	17	Each	11.2005	190.41
SAFETY VALVES Screwed				
Crane 2 in. 125 lb. WP L&W Type	1	Each	5.6714	5.67

2453

Form 504 10-58 7-51

## TRANSMISSION SYSTEM MEASURING STATION EQUIPMENT

"K" System

5792

ITEM	QUANTITY	UNIT	UNIT COST	AMOUNT
<b>SIKES AND LAUDERDALE, WAYLAND, STEPHENS COUNTY, TEXAS-LINE K-4</b>				
<b>METERS</b>				
Emco No. 2, 50 lbs. T. Serial No. 2567 with Foxboro PV&T Recording Gauge, Serial No. F-253, 0-50 lbs. Static; with 7 day Foxboro Clock.	1	Each	106.7748	\$ 106.77
<b>REGULATORS</b>				
Emco 2 in. HP Balanced Valve, Serial No. 1574 with 11 in. Diaphragm case; 600 lbs. inlet pressure and 50 lbs. outlet pressure; 6 bolts in head Flanged	1	Each	87.7250	87.73
Fulton 1 in. HP with 5 in. Diaphragm case 4 bolts in head Screwed.	1	Each	18.0550	18.06
<b>GATE VALVES Flanged</b>				
Crane DD OS&Y				
2 in. 1000 lbs. T. with 2 x 6-1/2 in. KH CI 8 bolts CFBO.	1	Each	19.3618	19.36
Kelly Jones NRS				
2 in. 125 lbs. WP with 2 x 6 in. Std. CI 4 bolts CFBO.	1	Each	7.6441	7.64
O. I. C. NRS				
2 in. 125 lbs. WP with 2 x 6 in. Std. CI 4 Bolts CFBO	1	Each	7.5801	7.58
Walworth NRS				
2 in. 125 lbs. WP with 2 x 6 in. Std. CI 4 bolts CFBO.	1	Each	7.6441	7.64
<b>GATE VALVES Screwed</b>				
Crane 1/2 in. 125 lbs. WP Brass	1	Each	.6687	.67
Darling DD NRS				
2 in. 1000 lbs. T. No. 101	3	Each	13.1367	39.41
Westcott 2 in. 500 lbs. WP NRS	1	Each	12.7711	12.77
<b>GLOBE VALVES Screwed</b>				
Powell Brass				
2 in. 300 lbs. SWP RS	1	Each	15.5365	15.54

2454

## TRANSMISSION SYSTEM MEASURING STATION EQUIPMENT

"K" System

5793-5811

ITEM	QUANTITY	UNIT	UNIT COST	AMOUNT
SIKES AND LAUDERDALE, WAYLAND, STEPHENS COUNTY, TEXAS <u>LINE K-4 (Cont'd)</u>				
PLUG VALVES Flanged				
Nordstrom				
2 in. 250 lbs. WP with 2 x 6-1/2 in. EH CI 8 bolts CFBO	1	Each	15.4336	\$ 15.43
PIPE Threaded and Coupled (Random Lengths)	1	Lot		3.43
CUSHIONS				
8 in. x 7 ft. 10 in. Baseball Welded Ends; 1/2 in. welded drip Connection 10-1/2 in. long with 1- 2 in. opening	1	Each	23.6900	23.69
FITTINGS	1	Lot		14.25
WELDS	1	Lot		.37
Material Cost				\$ 380.34
Installation				107.91
TOTAL COST INSTALLED				\$ 488.25
VALLEY MILLS, BOSQUE COUNTY, TEXAS, <u>LINE K-5</u>				
METERS				
Metric No. 250 B, 250 lbs. T. Serial No. 02235 with Metric PV&T Recording Gauge, Serial No. 3382 0-100 lbs. Static with 7 day Westcott Clock	1	Each	333.5080	\$ 333.51
REGULATORS				
Emco 2 in. HP Balanced Valve No. 1063 with 11 in. Diaphragm Case, 6 Bolts CFBO	1	Each	87.7250	87.73
Fulton 1-1/4 in. HP with 5-1/2 in. Diaphragm Case, 4 Bolts Screwed	1	Each	22.1000	22.10



2455

Form 281-100M-7-51

## TRANSMISSION SYSTEM MEASURING STATION EQUIPMENT

5812

"K" System

ITEM	QUANTITY	UNIT	UNIT COST	AMOUNT
<b>SWEETWATER, NOXAN COUNTY, TEXAS,</b>				
<b>LINE KC-3</b>				
<b>METERS</b>				
Westcott Orifice Bristol case 100 in. Differential and Static with 24 hour clock Serial No. 14646 Company No. 1199	1	Each	130.3262	\$ 130.33
Westcott Differential Recorder Bristol case 20 in. differential with 24 hour clock Serial No. 14788 Company No. 1199A	1	Each	113.7437	113.74
<b>METER PIPING</b>				
Wide Range screwed installation with Steel Needle Valves	1	Set	25.1700	25.17
<b>REGULATORS</b>				
Emco 4 in. HP Balanced Valve No. 3028 with 8 in. diaphragm case 6 bolts with 4 x 10 in. EH CI 8 bolts CFBO	1	Each	158.7412	158.74
Fulton 2 in. HP with 5 in. dia- phragm case no bolts screwed	1	Each	54.9600	54.96
<b>GAUGES</b>				
Indicating Pressure Foxboro HR Flanged case with 5 in. dial Range 0-500 lbs.	2	Each	4.3114	8.62
<b>GATE VALVES Flanged</b>				
Valworth DD OS&Y 6 in. 175 lbs. WP with 6 x 11 in. CI Std. 8 bolts CFBO	4	Each	30.0070	120.03
4 in. 175 lbs. WP with 4 x 9 in. CI Std. 8 bolts CFBO	1	Each	19.1291	19.13
4 in. 1000 lbs. T. with 4 x 10 in. EH CI 8 bolts CFBO	1	Each	35.7850	35.79
4 in. 1000 lbs. T.	3	Each	32.2688	96.81
<b>GLOBE VALVES Screwed</b>				
Lunkenheimer Brass 1/4 in. 200 lbs. WP	2	Each	.6643	1.33
<b>PLUG VALVES Flanged</b>				
Nordstrom 4 in. 250 lbs. WP with 4 x 10 in. EH CI 8 bolts CFBO	2	Each	45.8848	91.77

2453

## TRANSMISSION SYSTEM MEASURING STATION EQUIPMENT

"K" System

5813-5824

ITEM	QUANTITY	UNIT	UNIT COST	AMOUNT
<b>SWEETWATER, NOLAN COUNTY, TEXAS, LINE KC-3 (Cont'd)</b>				
<b>SAFETY VALVES</b> Screwed Crane 4 in. 125 lbs. WP LAW type No. 12635	1	Each	5.6714	\$ 5.67
<b>PIPE</b> Plain End (Random Lengths)	1	Lot		39.85
<b>CUSHIONS</b> 6 in. x 60 ft. Orange Peel welded ends with 1- 4 in. opening	1	Each	54.3900	54.39
6 in. x 60 ft. Orange Peel other end welded 90 degree to Riser	1	Each	50.4900	50.49
<b>FITTINGS</b>	1	Lot		76.06
<b>WELDS</b>	1	Lot		74.60
Material Cost				\$ 1,157.48
Installation				307.53
<b>TOTAL COST INSTALLED</b>				<b>\$ 1,465.01</b>
<b>ROSCOE, NOLAN COUNTY, TEXAS, LINE KC-4</b>				
<b>METERS</b> Emco No. 4 500 lbs. T. Serial No. 5377 with Wylie PV&T Recording Gauge Serial No. 2035 0-76 lbs. Static with 7 day Foxboro clock	1	Each	471.9596	\$ 471.96
<b>REGULATORS</b> Emco 2 in. HP Balanced Valve with 5-1/2 in. diaphragm case 6 bolts with 2 x 6-1/2 in. EH CI 8 bolts CFBO	1	Each	89.6518	89.65
Fulton 1-1/4 in. HP with 3-1/2 in. diaphragm case 4 bolts screwed	1	Each	22.1000	22.10

2457

Form 254--100M--1-51

## TRANSMISSION SYSTEM MEASURING STATION EQUIPMENT

"K" System

5825

ITEM	QUANTITY	UNIT	UNIT COST	AMOUNT
<b>MORAN COMPRESSING STATION LOT, SHACKELFORD COUNTY, TEXAS, LINE KC-A (Cont'd)</b>				
<b>GAUGES</b>				
Recording Pressure Foxboro 9-1/2 in. Iron Rim Iron Back Serial No. A-69524 Chart No. 79980 with 7 day clock Range 0-1000 lbs.	1	Each	57.4238	\$ 57.42
<b>GATE VALVES Flanged</b>				
Vestcott 4 in. 500 lbs. WP No. 452 DD NRS with 4 x 10 in. NH CI 8 bolts CF80	3	Each	29.2900	87.87
<b>GLOBE VALVES Screwed</b>				
Lankenheimer Brass 1/4 in. 150 lbs. WP	4	Each	.9841	3.94
<b>CUSHIONS</b>				
10 x 59 in. baseball welded ends with 2- 1/4 in. 1- 2 in. and 1- 4 in. openings	1	Each	30.2900	30.29
<b>FITTINGS</b>				
	1	Lot		8.25
<b>WELDS</b>				
	1	Lot		14.99
Material Cost				\$ 380.31
Installation				103.75
<b>TOTAL COST INSTALLED</b>				<b>\$ 484.06</b>
<b>RANDER CREAMERIES, ABILENE, TAYLOR COUNTY, TEXAS, LINE KC</b>				
<b>METERS</b>				
Euco No. 4 500 lbs. T. Serial No. 5683 with Wylie PV&T Recording Gauge Serial No. 291 0-76 lbs. Static with 7 day Foxboro clock	1	Each	471.9596	\$ 471.96

2453

Form 254-100M-7-52

## TRANSMISSION SYSTEM MEASURING STATION EQUIPMENT

"K" System

5826

ITEM	QUANTITY	UNIT	UNIT COST	AMOUNT
<b>BANNER CREAMERIES, ABILENE, TAYLOR COUNTY, TEXAS, LINE KU (Cont'd)</b>				
<b>REGULATORS</b>				
Fulton 1 in. HP with 3-3/4 in. diaphragm case 4 bolts screwed	1	Each	18.0550	18.06
Fulton 1-1/4 in. HP with 5 in. diaphragm case 4 bolts screwed	1	Each	22.1000	22.10
<b>GAUGES</b>				
Indicating Pressure				
Foxboro Model A. Brass Flare Rim, Iron case with 5 in. dial				
Range 0-100 lbs.	1	Each	4.3114	4.31
Range 0-300 lbs.	2	Each	4.3114	8.62
<b>GATE VALVES Flanged</b>				
Walworth DD OS&Y				
2 in. 700 lbs. T. with 2 x 6-1/2 in. EH CI 8 bolts CFBO	7	Each	17.2655	120.86
2 in. 700 lbs. T. Walworth OS&Y	4	Each	15.3387	61.35
2 in. 175 lbs. WP with 2 x 6 in. CI Std. 4 bolts CFBO	1	Each	10.1093	10.11
<b>GLOBE VALVES Screwed</b>				
Lunkenheimer Brass RS				
1/4 in. 200 lbs. WP	1	Each	.6643	.66
<b>SAFETY VALVES Screwed</b>				
Crane 2 in. 125 lbs. WP No.12687 LSW type	1	Each	5.6714	5.67
<b>PIPE Threaded and Coupled (Random Lengths)</b>				
	1	Lot		2.20
<b>PIPE Plain End (Random Lengths)</b>				
	1	Lot		19.39
<b>FITTINGS</b>				
	1	Lot		23.94
<b>WELDS</b>				
	1	Lot		31.89
Material Cost				\$ 801.12
Installation				218.46
<b>TOTAL COST INSTALLED</b>				<b>\$ 1,019.58</b>

2459

Form 334 100M 7-53

## TRANSMISSION SYSTEM MEASURING STATION EQUIPMENT

"K" System

5827

ITEM	QUANTITY	UNIT	UNIT COST	AMOUNT
<u>D. M. ODOM, BRAZOS, PALO PINTO</u> <u>COUNTY, TEXAS, LINE KN</u>				
<b>METERS</b>				
Emco No. 3, 500 lbs. T. Serial No. 6973 with Foxboro PV&T Recording Gauge, Serial No. F-173, 0-100 lbs. Static with 7 day Foxboro clock.	1	Each	260.4350	\$ 260.44
<b>REGULATORS</b>				
Emco 2 in. HP Balanced Valve type No. 1072 with 7-1/2 in. diaphragm case 250 lbs. inlet and 50 lbs. outlet pressure 6 bolts CFBO	1	Each	89.6518	89.65
<b>GATE VALVES Screwed</b>				
Westcott DD NRS 2 in. 500 lbs. WP	2	Each	12.7711	25.54
White Star Powell Brass 2 in. 200 lbs. WP	2	Each	9.4773	18.95
<b>PIPE Threaded and Coupled</b> (Random Lengths)				
	1	Lot		1.06
<b>FITTINGS</b>				
	1	Lot		9.02
<b>WELDS</b>				
	1	Lot		.92
Material Cost				\$ 405.58
Installation				114.93
<b>TOTAL COST INSTALLED</b>				<b>\$ 520.51</b>
<u>STATION 2989 PLUS 60 WEAR TAP TO</u> <u>GORDON GASOLINE PLANT, PALO PINTO</u> <u>COUNTY, TEXAS, LINE K</u>				
<b>METERS</b>				
Foxboro Type C Orifice Range 100 in. differential 500 lbs. Static with 24 hour clock, Chart No. 85828 Serial No. 49097 Company No. 1011.	1	Each	141.2682	\$ 141.27

## TRANSMISSION SYSTEM MEASURING STATION EQUIPMENT

"K" System

5828-5843

ITEM	QUANTITY	UNIT	UNIT COST	AMOUNT
<b>STATION 2989 PLUS 60 NEAR TAP TO GORDON GASOLINE PLANT, PALO PINTO COUNTY, TEXAS. LINE K (Cont'd)</b>				
<b>METER PIPING</b>				
Single Screwed Installation with Steel Needle Valves throughout	1	Each	23.1700	\$ 23.17
<b>FITTINGS</b>	1	Lot		89.18
Material Cost				\$ 253.62
Installation				72.02
<b>TOTAL COST INSTALLED</b>				\$ 325.64
<b>STATION 4038 PLUS 1 JUNCTION OF LINES K AND KC, EASTLAND COUNTY, TEXAS. LINE K</b>				
<b>METERS</b>				
Westcott Orifice Taylor case 100 in. differential and Static with 24 hour clock Serial No. 31951 Company No. 1024	1	Each	130.3262	\$ 130.33
<b>METER PIPING</b>				
Single Screwed Installation with Steel Needle Valves throughout	1	Set	23.1700	23.17
<b>FITTINGS</b>	1	Lot		46.11
Material Cost				\$ 199.61
Installation				56.68
<b>TOTAL COST INSTALLED</b>				\$ 256.29



2461

## TRANSMISSION SYSTEM MEASURING STATION EQUIPMENT

"L" System

5844-5850

ITEM	QUANTITY	UNIT	UNIT COST	AMOUNT
<b>ROUND ROCK, WILLIAMSON COUNTY, TEXAS, LINE L</b>				
<b>METERS</b>				
Emco No. 4 100 lb. T Serial No. B-5885 Emco combined PVET Gauge Serial No. 134139 0-100 lbs. Static with Emco 7 day clock	1	Each	302.3408	\$ 302.34
<b>REGULATORS</b>				
Fulton 1 in. HP with 5-1/2 in. diaphragm case 4 bolts screwed	1	Each	18.0550	18.06
Fulton 1-1/4 in. HP with 7-1/2 in. diaphragm case 4 bolts screwed	1	Each	22.1000	22.10
<b>GAUGES</b>				
Indicating Pressure Foxboro 5 in. dial Model A CI Case Brass Trimmed Range 0-250 lbs.	1	Each	4.3114	4.31
Recording Pressure Foxboro 10 in. Recorder P&T 7 day clock Serial No. 52892 Chart No. 79977 CI Case Range 0-500 lbs.	1	Each	35.1092	35.11
<b>GATE VALVES Flanged</b>				
Valworth DD Brass Stem OS&Y 4 in. 175 lb. WF	1	Each	16.8539	16.85
4 in. 175 lb. WF with 4 x 9 in. CI Std. GYRO	3	Each	19.1291	57.39
4 in. 700 lb. T	3	Each	28.7484	86.25
4 in. 700 lb. T (50% Ownership)	1	Each	28.7484	14.37
Valworth Brass Stem OS&Y 4 in. 700 lb. T	2	Each	28.7484	57.50
<b>GLOBE VALVES Screwed</b>				
Lunkenheimer Renewo 1/4 in. 200 lb. WF Brass	2	Each	.6643	1.33
<b>SAFETY VALVES Screwed</b>				
Crane 2 in. 125 lb. WF No. 27 L&W Type	1	Each	5.6714	5.67

2462

## TRANSMISSION SYSTEM MEASURING STATION EQUIPMENT

"L" System

5851

ITEM	QUANTITY	UNIT	UNIT COST	AMOUNT
<b>HILLSBORO, HILL COUNTY, TEXAS, LINE L-4</b>				
<b>METERS</b>				
Foxboro Type 207 Orifice Meter Range 100 in. differential 100 lbs. static with 24 hour clock Chart No. 898039 Serial No. A-74998 Company no. 55	1	Each	139.0256	139.03
Foxboro Type T Differential Recorder Range 20 in. differential only with 24 hour Clock Chart No. 89863 Serial No. 78106 Company No. 55	1	Each	106.1254	106.13
<b>METER PIPING</b>				
Wide Range Screwed Installation with Steel Needle Valves	1	Set	25.1700	25.17
<b>REGULATORS</b>				
Fulton 2 in. HP with 7-1/2 in. diaphragm case screwed	1	Each	54.9600	54.96
Fulton 4 in. HP with 7-1/2 in. diaphragm case. 4 bolts LE CFBO	1	Each	122.5890	122.59
<b>GAUGES</b>				
Indicating Pressure				
Crosby CI Case Brass Trim 5 in. Dial Range 0-500 lbs.	1	Each	3.7586	3.76
Foxboro CI Case Brass Trim 5 in. Dial Range 0-500 lbs.	1	Each	4.3114	4.31
<b>GATE VALVES Flanged</b>				
Kennedy NRS				
4 in. KH With CI KH CFBO	2	Each	40.1951	80.39
4 in. KH	2	Each	36.6789	73.36
Westcott NRS				
4 in. 125 lbs. WF No. 412 Brass Stem with CI Std. CFBO	4	Each	15.7192	62.88

2462

2463

Form 344 (Rev. 7-61)

## TRANSMISSION SYSTEM MEASURING STATION EQUIPMENT

"L" System

5852-5857

ITEM	QUANTITY	UNIT	UNIT COST	AMOUNT
<b>HILLSBORO, HILL COUNTY, TEXAS, LINE L-4 (Cont'd)</b>				
<b>GATE VALVES</b> Screwed Crane NRS 2 in. 250 lb. WP	1	Each	11.4937	\$ 11.49
<b>NEEDLE VALVES</b> Screwed Metric 1/4 in.	2	Each	1.2588	2.52
<b>PLUG VALVES</b> Flanged Nordstrom 4 in. 250 lb. WP with CI EH CFBO	1	Each	45.8848	45.88
4 in. 250 lb. WP	1	Each	42.3686	42.37
<b>SAFETY VALVES</b> Screwed Crane 2 in. 125 lb. WP Lever Type No. 31	1	Each	5.6714	5.67
<b>PIPE</b> (Random Lengths)	1	Lot		13.43
<b>HEADERS</b> Orange Peel Welded Ends 12-1/2 in. x 7 ft. with 4 4 in. openings and 1 1/4 in. opening	1	Each	68.9900	68.99
12-1/2 in. x 7 ft. with 4 4 in. openings	1	Each	68.7600	68.76
6 in. x 7 ft. with 2 6 in. and 2 4 in. openings (50% Ownership)	1	Each	32.5000	16.25
<b>FITTINGS</b>	1	Lot		64.30
<b>WELDS</b>	1	Lot		30.12
<b>Material Cost</b>				\$ 1,042.36
<b>Installation</b>				287.48
<b>TOTAL COST INSTALLED</b>				\$ 1,329.84

2454

## TRANSMISSION SYSTEM MEASURING STATION EQUIPMENT

"L" System

5858

ITEM	QUANTITY	UNIT	UNIT COST	AMOUNT
<u>COLLEGE STATION, BRAZOS COUNTY, TEXAS, LINE L-8 (Cont'd)</u>				
<b>SAFETY VALVES</b>				
Crane 6 in. 125 lb. WP L&W Type No. 26	1	Each	32.6161	\$ 32.62
<b>PIPE Plain End (Random Lengths)</b>	1	Lot		38.68
<b>CUSHIONS</b>				
6 in. x 52 ft. 5 in. with orange peel welded end with 1 45 degree weld other end 90 degree welded to Riser	1	Each	49.1500	49.15
6 in. x 63 ft. 3 in. with orange peel welded end with 1 45 degree weld other end 90 degree welded to Riser	1	Each	55.6900	55.69
<b>FITTINGS</b>	1	Lot		104.69
<b>WELDS</b>	1	Lot		67.26
Material Cost				\$ 1,453.25
Installation				393.62
<b>TOTAL COST INSTALLED</b>				<b>\$ 1,846.87</b>
<u>TAP TO PERRY GIN, FALLS COUNTY, TEXAS, OFF LINE L-8</u>				
<b>METERS</b>				
Emco No. 3 Serial No. 8035 0-100 T with Foxboro PV&T Gauge No. F-182 0-100 lbs. Static 7 day Emco clock	1	Each	229.7000	\$ 229.70
<b>REGULATORS</b>				
Fulton 1-1/4 in. IP with 7-1/4 in. diaphragm case 4 bolts screwed	1	Each	22.1000	22.10
Fulton 1 in. HP with 5-1/2 in. diaphragm case 4 bolts screwed	1	Each	18.0550	18.06

## TRANSMISSION SYSTEM MEASURING STATION EQUIPMENT

"L" System

5859

ITEM	QUANTITY	UNIT	UNIT COST	AMOUNT
<b>COLLEGE STATION, BRAZOS COUNTY, TEXAS, LINE L-8</b>				
<b>METERS</b>				
Emco No. 4 500 lb. T Serial No. 5791 with Foxboro PV&F Recording Gauge Serial No. F-276 0-100 lbs. Static with 7 day Foxboro clock	1	Each	406.7500	\$ 406.75
<b>REGULATORS</b>				
Fulton 1-1/4 in. with 5 in. diaphragm case 4 bolts screwed	1	Each	22.1000	22.10
Emco 4 in. HP Balanced Valve No. 4035 with 11 in. diaphragm case 6 bolts flanged	1	Each	155.2250	155.23
<b>GAUGES</b>				
Indicating Pressure Foxboro CI Case Brass Trim- ed 5 in. dial Range 0-250 lbs.	1	Each	4.3114	4.31
Range 0-500 lbs.	1	Each	4.3114	4.31
<b>ANGLE VALVES Screwed</b>				
Metric 1/4 in.	2	Each	1.2588	2.52
<b>GATE VALVES Flanged</b>				
Walworth DD Brass Stem OS&Y				
4 in. 175 lb. WP CFBO	1	Each	19.1291	19.13
6 in. 175 lb. WP CFBO	3	Each	30.0070	90.02
6 in. 175 lb. WP	2	Each	26.8972	53.79
6 in. 700 lb. T	3	Each	45.7815	137.34
Kennedy Brass Stem OS&Y				
6 in. 150 lb. WP CFBO	1	Each	30.8727	30.87
<b>GLOBE VALVES Screwed</b>				
Walworth Brass 1/4 in. 125 lb. WP	2	Each	.4067	.81
<b>NEEDLE VALVES Screwed</b>				
Metric 1/4 in.	1	Each	1.2588	1.26
<b>PLUG VALVES Flanged</b>				
Nordstrom 6 in. 250 lb. WP	2	Each	88.3607	176.72

## TRANSMISSION SYSTEM MEASURING STATION EQUIPMENT

"L" System

5860-5869

ITEM	QUANTITY	UNIT	UNIT COST	AMOUNT
<u>TAP TO PERRY GIN, FALLS COUNTY, TEXAS, OFF LINE L-8 (Cont'd)</u>				
<b>GATE VALVES Flanged</b>				
Walworth DD OS&Y				
2 in. 700 lb. T Brass Stems	7	Each	15.3387	\$ 107.37
2 in. 700 lb. T Brass Stem	1	Each	15.3387	7.67
(50% Ownership)	4	Each	10.1093	40.44
2 in. 175 lb. WP CFBO				
<b>NEEDLE VALVES Screwed</b>				
Lunkenheimer 1/4 in. Brass Std.	1	Each	.6293	.63
<b>SAFETY VALVES Screwed</b>				
Crané Brass				
2 in. 125 lb. WP L&W Type	1	Each	5.6714	5.67
<b>PIPE Plain End (Random Lengths)</b>	1	Lot		5.95
<b>CUSHIONS</b>				
4 in. x 39 ft. 10 in. orange peel welded ends 1 2 in. opening	2	Each	24.1100	48.22
<b>FITTINGS</b>	1	Lot		31.22
<b>WELDS</b>	1	Lot		21.98
<b>Material Cost</b>				\$ 539.01
<b>Installation</b>				146.84
<b>TOTAL COST INSTALLED</b>				\$ 685.85
<u><b>MART, McLENNAN COUNTY, TEXAS, LINE L-8-1</b></u>				
<b>METERS</b>				
Westcott Orifice Bristol Case 100 in. Differential Static Serial No. 14974 Company No. 1186 with 24 hour clock	1	Each	130.3262	\$ 130.33
Westcott Differential Recorder Bristol Case without Static 20 in. Differential Serial No. 14979 Company No. 1186 with 24 hour clock	1	Each	113.7437	113.74



2467

Form 341 10-58 1-53

Form 341

## TRANSMISSION SYSTEM MEASURING STATION EQUIPMENT

"L" System

5870-5872

ITEM	QUANTITY	UNIT	UNIT COST	AMOUNT
<b>BRYAN, HRAZOS COUNTY, TEXAS</b>				
<b>LINE L-8-6</b>				
<b>METERS</b>				
Foxboro Type C Orifice Meter Range 100 in. differential 100 lbs. Static with 24 hour clock Chart No. 89870 Serial No. 46295 Company No. 1208	1	Each	129.6258	129.63
Foxboro Type T Differential Recorder Range 20 in. Differ- ential only with 24 hour clock Chart No. 89863 Serial No. 78322 Company No. 1208	1	Each	106.1254	106.13
<b>METER PIPING</b>				
Wide Range Screwed Installation with Steel Needle Valves	1	Set	25.1700	25.17
<b>REGULATORS</b>				
Fulton 2 in. HP with 7-1/2 in. diaphragm case no bolts screwed	1	Each	54.9600	54.96
Emco 2 in. HP Balanced Valve flanged No. 10200 with 9-1/2 in. diaphragm case 6 bolts CFBO	1	Each	89.6518	89.65
<b>GAUGES</b>				
Indicating Pressure Foxboro Model A CI Case Brass Trimmed 5 in. dial Range 0-60 lbs.	1	Each	4.3114	4.31
Recording Pressure Foxboro 10 in. P&T 7 day clock Serial No. 20048 Chart No. 79877 CI Case Range 0-500 lbs.	1	Each	46.5752	46.58
<b>GATE VALVES Flanged</b>				
Walworth DD Brass Stem OS&Y 4 in. 175 lbs. WP CFBO	5	Each	19.1291	95.65
4 in. 700 lbs. T	4	Each	28.7484	114.99
<b>GLOBE VALVES Screwed</b>				
Walworth 1/4 in. 125 lb. WP Brass	2	Each	.4067	.81

85

## TRANSMISSION SYSTEM MEASURING STATION EQUIPMENT

"L" System

5873

ITEM	QUANTITY	UNIT	UNIT COST	AMOUNT
<b>CALVERT, ROBERTSON COUNTY, TEXAS, LINE L-8-7 (Cont'd)</b>				
<b>WELDS</b>	1	Lot		\$ 29.55
Material Cost				\$ 736.10
Installation				200.66
<b>TOTAL COST INSTALLED</b>				<b>\$ 936.76</b>
<b>NORTH WACO, MCLENNAN COUNTY, TEXAS, LINE L-9</b>				
<b>METERS</b>				
Foxboro Type 207 Orifice Meter Range 100 in. Differential 250 lbs. Static with 24 hour clock Chart No. 858049 Serial No. A-29728 Company No. 58	1	Each	143.1046	\$ 143.10
Foxboro Type 207 Orifice Meter Range 100 in. Differential 250 lbs. Static with 24 hour clock Chart No. 858049 Serial No. A-8293 Company No. 59	1	Each	143.1046	143.10
Foxboro Type 207 Orifice Meter Range 100 in. Differential 250 lbs. Static with 24 hour clock Chart No. 858049 Serial No. A-29731 Company No. 96	1	Each	143.1046	143.10
Foxboro Type 105 Differential Recorder Range 20 in. Differ- ential only with 24 hour clock Chart No. 858050 Ser- ial No. 25170 Company No. 58	1	Each	119.9348	119.93
<b>METER PIPING</b>				
Wide Range Screwed Installation with Steel Needle Valves	1	Set	25.1700	25.17
Single Screwed Installation with Steel Needle Valves	2	Set	23.1700	46.34

## TRANSMISSION SYSTEM MEASURING STATION EQUIPMENT

"L" System

5874

ITEM	QUANTITY	UNIT	UNIT COST	AMOUNT
<b>NORTH WACO, McLENNAN COUNTY, TEXAS, LINE L-9 (Cont'd)</b>				
<b>REGULATORS</b>				
Emco 10 in. HP Balanced Valve No. 8102 with 8 in. dia- phragm Case Maximum Inlet Pressure 600 lbs. 6 bolts CFBO	1	Each	471.4830	471.48
Goldbug 1/2 in. HP Screwed	1	Each	12.1757	12.18
Goldbug Jefferson 1/2 in. HP Screwed	1	Each	12.1757	12.18
<b>GAUGES</b>				
Indicating Pressure Foxboro Steel Tube Model A CI Case Brass Trimmed 5 in. dial Range 0-500 lbs.	1	Each	4.3114	4.31
<b>CONTROLLERS</b>				
Foxboro Differential Scale 0-100 in. 8 in. dial No. A-47873 CI Case Complete with Brass Relief Valve Drip Well 1/8 in. Brass Regulator with Piping or Connections	1	Each	160.6620	160.66
Foxboro Intermittent No. A-27026 Scale 0-100 in. 8 in. dial Complete with 1/4 in. Brass Relief Valve and 2 in. Drip Well and 1/8 in. Brass Regulator without Piping or Connections	1	Each	160.6620	160.66
<b>ANGLE VALVES Screwed</b>				
Metric 1/4 in.	6	Each	1.2588	7.55
<b>AUTOMATIC RELIEF VALVES Flanged</b>				
Emco (Fulton Case) 8 in. with 12 in. diaphragm case CFBO	2	Each	736.5000	1,473.00
<b>GATE VALVES Flanged</b>				
Crane OS&Y 8 in. 700 lb. T	3	Each	69.0212	207.06
10 in. 700 lb. T DD	2	Each	113.3689	226.74

2470

## TRANSMISSION SYSTEM MEASURING STATION EQUIPMENT

"L" System

5875-5876

ITEM	QUANTITY	UNIT	UNIT COST	AMOUNT
<b>NORTH WACO, McLENNAN COUNTY, TEXAS, LINE L-9 (Cont'd)</b>				
<b>GATE VALVES Flanged (Cont'd)</b>				
Walworth DD OS&Y 8 in. 700 lb. T	3	Each	69.2272	\$ 207.68
<b>NEEDLE VALVES Screwed</b>				
Walworth 1/4 in. 125 lb. WP	1	Each	.4838	.48
Brass	6	Each	1.2588	7.55
Metric 1/4 in.				
<b>PLUG VALVES Screwed</b>				
Nordstrom 2 in. 150 lb. WP	1	Each	7.3739	7.37
<b>SPUR GEARED VALVES Flanged</b>				
Nordstrom 12 in. 150 lb. WP CFBO	1	Each	383.6908	383.69
<b>PIPE Threaded and Coupled (Random Lengths)</b>	1	Lot		2.29
<b>PIPE Plain End (Random Lengths)</b>	1	Lot		74.65
<b>HEADERS</b>				
Baseball Welded Ends				
16 x 84 in. with 2 12 in. openings and 1 10 in. opening and 1 1/4 in. open- ing	1	Each	71.4700	71.47
18 x 144 in. with 3 8 in. openings 1 10 in. opening and 1 12 in. opening	1	Each	99.2500	99.25
18 x 144 in. with 3 8 in. openings and 2 12 in. openings (50% Ownership)	1	Each	101.0700	50.54
<b>FITTINGS</b>	1	Lot		248.52
<b>WELDS</b>	1	Lot		16.04
<b>Material Cost</b>				\$ 4,526.09
<b>Installation</b>				1,280.85
<b>TOTAL COST INSTALLED</b>				<u>\$ 5,806.94</u>

## TRANSMISSION SYSTEM MEASURING STATION EQUIPMENT

"L" System

5877

ITEM	QUANTITY	UNIT	UNIT COST	AMOUNT
<b>BELTON, BELL COUNTY, TEXAS,</b>				
<b>LINE L-10 (Cont'd)</b>				
PIPE Plain End (Random Lengths)	1	Lot		\$ 19.38
<b>CUSHIONS</b>				
4 in. x 56 ft. 11 in. orange peel welded end other end 90 degree welded to Riser	1	Each	28.3400	28.34
4 in. x 57 ft. 7 in. orange peel welded ends 1 2 in. opening	1	Each	31.1300	31.13
<b>HEADERS</b>				
6 in. x 5 ft. 7 in. baseball welded ends 1 1/4 in. open- ing and 1 2 in. opening	1	Each	16.4300	16.43
<b>FITTINGS</b>	1	Lot		72.18
<b>WELDS</b>	1	Lot		45.67
Material Cost				\$ 863.37
Installation				232.23
<b>TOTAL COST INSTALLED</b>				<b>\$ 1,095.60</b>
<b>TEMPLE, BELL COUNTY, TEXAS,</b>				
<b>LINE L-11</b>				
<b>METERS</b>				
Foxboro Type 207 Orifice Meter Range 100 in. Differential 250 lbs. Static with 24 hour clock Chart No. 858049 Serial No. A-8298 Company No. 1194	1	Each	143.1046	\$ 143.10
Foxboro Type 105 Differential Recorder Range 20 in. Differ- ential only 24 hour clock Chart No. 858050 Serial No. A-8289 Company No. 1194	1	Each	119.9348	119.93
<b>METER PIPING</b>				
Wide Range Screwed Installation with Steel Needle Valves	1	Set	25.1700	25.17

## TRANSMISSION SYSTEM MEASURING STATION EQUIPMENT

"L" System

5878-5911

ITEM	QUANTITY	UNIT	UNIT COST	AMOUNT
TEMPLE, BELL COUNTY, TEXAS, LINE L-11 (Cont'd)				
<b>REGULATORS</b>				
Emco 4 in. HP Balanced Valve 8 in. diaphragm case 6 bolts No. 1323 flanged	1	Each	155.2250	155.23
Emco 4 in. HP Balanced Valve with 9-1/2 in. diaphragm case 6 bolts number plate missing flanged	1	Each	155.2250	155.23
<b>GAUGES</b>				
Indicating Pressure Foxboro Model A CI Case Brass Trimmed 5 in. dial Range 0-100 lbs.	1	Each	4.3114	4.31
Foxboro CI Case Brass Trimmed 5 in. dial Range 0-250 lbs.	1	Each	4.3114	4.31
Recording Pressure Foxboro 10 in. Recorder PAT Serial No. 48866 Chart No. 79977 Company No. R-32 CI Case 7 day clock Range 0-500 lbs.	1	Each	46.5752	46.58
<b>GATE VALVES Flanged</b> Walworth DD Brass Stem ORAY 6 in. 700 lbs. T	9	Each	45.7815	412.03
<b>SEWING VALVES Screwed</b> Metric 1/4 in. Std.	2	Each	1.2588	2.52
<b>PLUG VALVES Flanged</b> Nordstrom 6 in. 250 lbs. WF	2	Each	88.3607	176.72
<b>SAFETY VALVES Screwed</b> Crane 6 in. 125 lbs. WF CI L&W	1	Each	32.6161	32.61
<b>PIPE Plain End (Random Lengths)</b>	1	Lot		49.14
<b>CUSHIONS</b>				
6 in. x 46 ft. 4 in. orange peel welded end other end 90 degree welded to Riser	1	Each	41.3900	41.39
6 in. x 42 ft. 9 in. orange peel welded end other end 90 degree welded to Riser	1	Each	39.0160	39.01

## TRANSMISSION SYSTEM MEASURING STATION EQUIPMENT

"L" System

5912

98	ITEM	QUANTITY	UNIT	UNIT COST	AMOUNT
	CHILTON, FALLS COUNTY, TEXAS, LINE L-26-2 (Cont'd)				
	FITTINGS	1	Lot	\$	30.08
	WELDS	1	Lot		24.37
	Material Cost			\$	550.25
	Installation				149.35
	TOTAL COST INSTALLED			\$	699.60
	SOUTH WACO, MCLENNAN COUNTY, TEXAS, LINE L-27				
	METERS				
	Foxboro Type 207 Orifice Meter Range 100 in. Differential 250 lbs. Static with 24 hour clock Chart No. 858049 Serial No. A-80540 Company No. 1293	1	Each	143.1046	\$ 143.10
	Foxboro Type 105 Differential Recorder Range 20 in. Differ- ential only with 24 hour clock Chart No. 858050 Serial No. A-81935 Company No. 1293	1	Each	119.9348	119.93
	Foxboro Type 207 Orifice Meter Range 100 in. Differential 250 lbs. Static 24 hour clock Chart No. 858049 Serial No. A-80539 Company No. 1294	1	Each	143.1046	143.10
	METER PIPING				
	Wide Range Screwed Installation with Steel Needle Valves	1	Set	25.1700	25.17
	Single Screwed Installation with Steel Needle Valves through- out	1	Set	23.1700	23.17
	REGULATORS				
	Emco 8 in. HP Balanced Valve No. 1049 with 9-1/2 in. dia- phragm case 6 bolts flanged	1	Each	379.5000	379.50



2474

## TRANSMISSION SYSTEM MEASURING STATION EQUIPMENT

"L" System

5913

ITEM	QUANTITY	UNIT	UNIT COST	AMOUNT
<u>SOUTH WACO, McLENNAN COUNTY,</u> <u>TEXAS, LINE L-27 (Cont'd)</u>				
REGULATORS (Cont'd)				
Goldbug 1/2 in. HP Screwed	1	Each	12.1757	12.18
GAUGES				
Indicating Pressure				
Foxboro Model J Steel Tube				
CI Case Brass Trimmed				
5 in. dial				
Range 0-500 lbs.	1	Each	12.2788	12.28
AUTOMATIC RELIEF VALVES Flanged				
Emco 6 in. with 9-1/2 in.				
Fulton diaphragm case 4				
bolts	1	Each	399.2500	399.25
GATE VALVES Flanged				
Walworth DD Brass Stem OS&Y				
6 in. 700 lb. T	6	Each	45.7815	274.69
NEEDLE VALVES Screwed				
Lunkenheimer 1/4 in. Brass				
Std.	1	Each	.6293	.63
Metric 1/4 in.	3	Each	1.2588	3.78
Metric Angle 1/4 in.	3	Each	1.2588	3.78
PLUG VALVES Flanged				
Nordstrom				
8 in. 250 lb. WP	2	Each	88.3607	176.72
10 in. 250 lb. WP Venturi				
Type	1	Each	147.2747	147.27
PIPE Threaded and Coupled				
(Random Lengths)	1	Lot		1.06
PIPE Plain End (Random lengths)	1	Lot		45.44
HEADERS				
12 in. x 6 ft. 8 in. with base-				
ball welded ends and 1 1/4				
in. opening 1 8 in. opening				
1 10 in. opening 1 12 in.				
opening	1	Each	57.3200	57.32
12 in. x 12 ft. with baseball				
welded ends with 3 6 in.				
openings 1 8 in. opening				
1 10 in. opening	1	Each	66.8600	66.86

## TRANSMISSION SYSTEM MEASURING STATION EQUIPMENT

"L" System

5914-5915

Q8	ITEM	QUANTITY	UNIT	UNIT COST	AMOUNT
	<u>SOUTH WACO, McLENNAN COUNTY,</u> <u>TEXAS, LINE L-27 (Cont'd)</u>				
	<b>HEADERS (Cont'd)</b> 12 in. x 12 ft. with baseball welded ends and 3 6 in. openings and 2 10 in. openings (50% Ownership)	1	Each	68.7600	\$ 34.38
	<b>CONTROLLERS</b> Foxboro 8 in. Differential Limit No. A-46742 CI Case Complete with 1/8 in. Brass Relief Valve and 1/8 in. Brass Regulator and Foxboro No. 1-A Drip Well without piping or connections	1	Each	160.6620	\$ 160.66
	<b>FITTINGS</b>	1	Lot		188.64
	<b>WELDS</b>	1	Lot		23.00
	Material Cost				\$ 2,441.91
	Installation				686.97
	<b>TOTAL COST INSTALLED</b>				<u>\$ 3,128.88</u>
	<u>OSCEOLA, HILL COUNTY, TEXAS,</u> <u>LINE L-28</u>				
	<b>METERS</b> Emco No. 3 100 lb. T Serial No. D-1395 with Emco Combined PV&T Recording Gauge Serial No. 155284 0-100 lbs. Static with 7 day Emco clock	1	Each	239.7850	\$ 239.79
	<b>REGULATORS</b> Pulton 1 in. HP with 5-1/2 in. diaphragm case 4 bolts screwed	1	Each	18.0550	18.06
	Pulton 1-1/4 in. HP with 7 in. diaphragm case 4 bolts screwed	1	Each	22.1000	22.10

## TRANSMISSION SYSTEM MEASURING STATION EQUIPMENT

"L" System

5916

ITEM	QUANTITY	UNIT	UNIT COST	AMOUNT
<b>W. J. NEAL, ALFALFA DRIER, NO. 1, McKENNA COUNTY, TEXAS, LINE L-8</b>				
<b>METERS</b>				
Emco No. 4 0-500 lbs. Serial No. 9241 Foxboro PYMT Gauge Serial No. F-129 0-80 lbs. Static with 7 day Foxboro Clock	1	Each	406.7500	\$ 406.75
<b>GATE VALVES Flanged</b>				
Crane Brass Stem NRS 2 in. 125 lb. WF CI Std. 4 bolts CFBO	1	Each	8.0836	8.08
Walworth DD Brass Stem OS&Y 2 in. 700 lb. T LE 4 bolts CFBO	1	Each	17.2655	17.27
<b>GATE VALVES Screwed</b>				
Crane DD Brass Stem OS&Y 2 in. 1000 lb. T Nq. 25	3	Each	17.0461	51.14
<b>PIPE Threaded and Coupled (Random Lengths)</b>				
	1	Lot		2.38
<b>FITTINGS</b>				
	1	Lot		10.64
<b>Material Cost</b>				\$ 496.26
<b>Installation</b>				140.94
<b>TOTAL COST INSTALLED</b>				\$ 637.20
<b>W. J. NEAL, ALFALFA DRIER, NO. 2, McKENNA COUNTY, TEXAS, LINE L-8</b>				
<b>METERS</b>				
Emco No. E-2 1 in. Serial No. 1016887	1	Each	29.5698	\$ 29.57
<b>REGULATORS</b>				
Fulton 1 in. with 11-1/2 in. diaphragm case screwed	1	Each	18.0550	18.06
Hercules Little Giant 1 in. HP screwed	1	Each	8.3400	8.34

2477

Form 284-100M-7-53

## TRANSMISSION SYSTEM MEASURING STATION EQUIPMENT

"L" System

5917-5919

ITEM	QUANTITY	UNIT	UNIT COST	AMOUNT
W. J. NEAL, ALFALFA DRIER, NO. 2, McKENNA COUNTY, TEXAS, LINE L-8 (Cont'd)				
PLUG VALVES Screwed Nordstrom 2 in. 250 lb. WP	1	Each	9.1458	\$ 9.15
PIPE Threaded and Coupled (Random Lengths)	1	Lot		1.17
FITTINGS	1	Lot		2.00
Material Cost				\$ 68.29
Installation				19.39
TOTAL COST INSTALLED				\$ 87.68
L & M JUNCTION, JOSHUA, JOHNSON COUNTY, TEXAS, LINE L				
METERS				
Foxboro Type C Orifice Meter Range 100 in. Differential 500 lbs. Static. 24 hour clock Chart No. 85828 Serial No. 70743 Company No. 54	1	Each	141.2682	\$ 141.27
METER PIPING				
Single Screwed Installation with Steel Needle Valves throughout	1	Set	23.1700	23.17
FITTINGS	1	Lot		46.09
Material Cost				\$ 210.53
Installation				59.79
TOTAL COST INSTALLED				\$ 270.32

- 2478

TRANSMISSION SYSTEM MEASURING STATION EQUIPMENT

"L" System

5920-5926

ITEM	QUANTITY	UNIT	UNIT COST	AMOUNT
<b>JOSHUA WAREHOUSE YARD, JOHNSON COUNTY, TEXAS, LINE L (Cont'd)</b>				
<b>FITTINGS</b>	1	Lot		\$ 53.00
Material Cost				\$ 217.44
Installation				61.76
<b>TOTAL COST INSTALLED</b>				\$ 279.20
<b>NEAR JUNCTION LINES L AND L-8, McLENNAN COUNTY, TEXAS, LINE L-8</b>				
<b>METERS</b>				
Foxboro Type C Orifice Meter Range 100 in. Differential 500 lbs. Static with Foxboro 7 day Jeweled clock Chart No. 85928 Serial No. 59819 Company No. 1295	1	Each	152.7382	\$ 152.74
<b>METER PIPING</b>				
Single Screwed Installation with Steel Needle Valves throughout	1	Set	23.1700	23.17
<b>GLOBE VALVES Screwed</b>				
No Name 1/2 in. 125 lbs. WP	2	Each	.4067	.81
<b>FITTINGS</b>	1	Lot		32.94
Material Cost				\$ 209.66
Installation				59.55
<b>TOTAL COST INSTALLED</b>				\$ 269.21

2473

Form 31-100M-1-48

## TRANSMISSION SYSTEM MEASURING STATION EQUIPMENT

5927

"M" System

ITEM	QUANTITY	UNIT	UNIT COST	AMOUNT
<b>MEXIA, LIMESTONE COUNTY, TEXAS, LINE M (Cont'd)</b>				
<b>GATE VALVES</b> Screwed Crane 2 in. 250 lbs. WP N RS Brass	1	Each	11.9953	\$ 12.00
<b>NEEDLE VALVES</b> Screwed Lunkenheimer 1/4 in. Brass Std.	1	Each	.6293	.63
<b>SAFETY VALVES</b> Screwed Crane 2 in. 125 lbs. WP LAW type	1	Each	5.6714	5.67
<b>PIPE</b> Threaded and Coupled (Random Lengths)	1	Lot		28.94
<b>PIPE</b> Plain End (Random Lengths)	1	Lot		27.64
<b>FITTINGS</b>	1	Lot		181.62
<b>WELDS</b>	1	Lot		11.04
Material Cost				\$ 1,055.79
Installation				296.71
<b>TOTAL COST INSTALLED</b>				<b>\$ 1,352.50</b>
<b>NORTH COSSICANA, HAVARRO COUNTY, TEXAS, LINE M-1</b>				
<b>METERS</b>				
Foxboro Type 207 Orifice Range 100 in. Differential 100 lbs. static with 24 hour clock Chart No. 898039 Serial No. A-79367 Company No. 52	1	Each	139.0256	\$ 139.03
Foxboro Type 105 Differential recorder Range 20 in. Differential only with 24 hour clock Chart No. 858050 Serial No. A- 77958 Company No. 52-A	1	Each	106.1254	106.13
<b>METER PIPING</b> Wide range screwed installation with steel Needle Valves	1	Set	25.1700	25.17

2480

## TRANSMISSION SYSTEM MEASURING STATION EQUIPMENT

"M" System

5928

ITEM	QUANTITY	UNIT	UNIT COST	AMOUNT
<b>NORTH CORSICANA, NAVARRO COUNTY, TEXAS, LINE M-1 (Cont'd)</b>				
<b>REGULATORS</b>				
Emco 4 in. HP Balanced Valve Serial No. 3845 with 8 in. diaphragm case 6 bolts CFBO	1	Each	158.7412	158.74
Emco 4 in. HP Balanced Valve Serial No. 4034 with 11 in. diaphragm case 6 bolts CFBO	1	Each	158.7412	158.74
<b>GAUGES</b>				
Indicating Pressure Foxboro Model A Brass trimmed CI case with 5 in. dial Range 0-250 lbs.	1	Each	4.3114	4.31
Recording Pressure Foxboro 10 in. with CI Case Serial No. 49825 Chart No. 79877 Company No. R-13 with 7 day clock	1	Each	46.5752	46.58
<b>GATE VALVES Flanged</b>				
Walworth ID OS&Y 4 in. 700 lbs. T with EH CI CFBO	1	Each	32.2646	32.26
4 in. 700 lbs. T with EH CI LE CFBO	4	Each	32.2646	129.06
6 in. 175 lbs. WP with EH CI CFBO	4	Each	30.0070	120.03
<b>NECKLE VALVES Screwed</b>				
Metric 1/4 in. EH	2	Each	1.2588	2.52
Lunkenheimer 1/4 in. Brass Std.	1	Each	.6293	.63
<b>PLUG VALVES Flanged</b>				
Kordstrom 4 in. 250 lbs. WP with EH CI CFBO	1	Each	45.8848	45.88
4 in. 250 lbs. WP with EH CI LE CFBO	1	Each	45.8848	45.88
<b>SAFETY VALVES Screwed</b>				
Walworth 4 in. 125 lbs. WP LAW type	1	Each	15.7096	15.71
<b>PIPE Threaded and Coupled (Random Lengths)</b>				
	1	Lot		37.71
<b>PIPE Plain End (Random Lengths)</b>				
	1	Lot		1.26



2481

Form 284-100M-7-50

## TRANSMISSION SYSTEM MEASURING STATION EQUIPMENT

W System

5929

LWB	ITEM	QUANTITY	UNIT	UNIT COST	AMOUNT
	<b>NORTH COSSICANA, NAVARRO COUNTY, TEXAS, LINE M-1 (Cont'd)</b>				
	<b>HEADERS</b>				
	8 x 72 in. with baseball welded ends with 2 6 in. and 2 8 in. welded openings (50% Ownership)	1	Each	42.8100	\$ 21.41
	18 x 72 in. with baseball welded ends with 4 4 in. welded openings	1	Each	63.5200	63.52
	18 x 72 in. with baseball welded ends with 2 4 in. and 2 6 in. welded openings	1	Each	66.3400	66.34
	<b>FITTINGS</b>	1	Lot		89.21
	<b>WELDS</b>	1	Lot		29.66
	Material Cost				\$ 1,339.78
	Installation				372.07
	<b>TOTAL COST INSTALLED</b>				<b>\$ 1,711.85</b>
	<b>ENGLIS, ELLIS COUNTY, TEXAS, LINE M-2</b>				
	<b>METERS</b>				
	Foxboro Type 207 Orifice Range 100 in. Differential, 100 lbs. static with 24 hour clock Chart No. 898039 Serial No. A-82033 Company No. 50	1	Each	139.0256	\$ 139.03
	Foxboro Type T Differential Recorder Range 20 in. Differ- ential only with 24 hour clock Chart No. 89863 Serial No. A-85446 Company No. 50-A	1	Each	106.1254	106.13
	<b>METER PIPING</b>				
	Wide Range screwed installation with steel Needle Valves	1	Set	25.1700	25.17
	<b>REGULATORS</b>				
	Emco 6 in. HP Balanced Valve Serial No. 1036 with 11 in. diaphragm case 6 bolts Flanged	1	Each	241.0000	241.00
	Fulton 4 in. HP with 7-1/2 in. diaphragm case 4 bolts with EH CI CSBO	1	Each	122.5890	122.59

2482

Form 284-100M-7-53

## TRANSMISSION SYSTEM MEASURING STATION EQUIPMENT

"M" System

5930

ITEM	QUANTITY	UNIT	UNIT COST	AMOUNT
<b>KEMIS, ELLIS COUNTY, TEXAS, LINE M-2</b>				
<b>GAUGES</b>				
Indicating Pressure				
Foxboro Model 5 Brass trimmed				
CI case steel tube with 5				
in. dial				
Range 0-500 lbs.	1	Each	4.3114	4.31
Ashcroft Brass trimmed CI				
case No. 7524- B 779 with				
5 in. dial				
Range 0-200 lbs.	1	Each	2.1692	2.17
<b>GATE VALVES Flanged</b>				
Darling IRBM DD NRS				
4 in. 700 lbs. T No. 72 with				
EH CI CFBO	4	Each	27.8978	111.59
6 in. 700 lbs. T No. 72 with				
EH CI CFBO	1	Each	43.8687	43.87
Lunkenheimer 6 in. 250 lbs. WP				
IRBM Wedged NRS with EH CI				
CFBO	1	Each	72.3205	72.32
Westcott IRBM DD NRS				
4 in. 500 lbs. WP with EH CI				
CFBO	1	Each	29.2900	29.29
4 in. 500 lbs. WP with EH CI				
LE CFBO	2	Each	29.2900	58.58
<b>GATE VALVES Screwed</b>				
Darling 6 in. 700 lbs. T IRBM				
DD NRS No. 71	1	Each	36.9966	37.00
Walworth-Kewanee 3 in. 125 lbs.				
WP IRBM Wedge NRS	1	Each	7.2293	7.23
<b>GLOBE VALVES Screwed</b>				
Lunkenheimer 1/2 in. 200 lbs.				
WP Brass	2	Each	1.0909	2.18
Lunkenheimer Renewo 1/2 in.				
200 lbs. WP Brass	2	Each	1.0909	2.18
<b>NEEDLE VALVES Screwed</b>				
Lunkenheimer 1/4 in. Brass Std.	1	Each	.6293	.63
<b>SAFETY VALVES Screwed</b>				
National Tool Company 3 in. CI				
Std. L&W type	1	Each	9.2404	9.24

2483

Form 104-100M-5-21

## TRANSMISSION SYSTEM MEASURING STATION EQUIPMENT

"K" System

5931

LW R	ITEM	QUANTITY	UNIT	UNIT COST	AMOUNT
	<b>EMNIS, ELLIS COUNTY, TEXAS, LINE M-2 (Cont'd)</b>				
	PIPE Threaded and Coupled (Random Lengths)	1	Lot		\$ 26.68
	<b>HEADERS</b>				
	6 in. x 5 ft. 4 in. one end flat end welded and other end threaded with 2 4 in. and 1 6 in. welded openings, 1 6 in. welded bull plug and 1 6 in. coupling	2	Each	27.98	55.96
	<b>FITTINGS</b>	1	Lot		134.27
	<b>WELDS</b>	1	Lot		5.66
	Material Cost				\$ 1,237.08
	Installation				349.73
	<b>TOTAL COST INSTALLED</b>				\$ 1,586.81
	<b>STATION 0 PLUS 14.5 EMNIS, ELLIS COUNTY, TEXAS, LINE M-2</b>				
	<b>REGULATORS</b>				
	Emco 2 in. MP Balanced Valve with 8 in. diaphragm case 6 bolts No. 4387 Flanged	1	Each	87.7250	\$ 87.73
	<b>GAUGES</b>				
	Indicating Pressure Foxboro Iron Body IR with 5 in. dial Range 0-250 lbs.	1	Each	4.3114	4.31
	<b>GATE VALVES Flanged</b>				
	Crane 4 in. 1000 lbs. T 1B I NEW OSAY	2	Each	32.2173	64.43
	<b>PIPE Plain End (Random Lengths)</b>	1	Lot		2.45
	<b>FITTINGS</b>	1	Lot		17.02

2484

## TRANSMISSION SYSTEM MEASURING STATION EQUIPMENT

"M" System

5932

ITEM	QUANTITY	UNIT	UNIT COST	AMOUNT
<b>STATION O PLUS 14.5 MNIS, ELLIS COUNTY, TEXAS, LINE M-2 (Cont'd)</b>				
<b>WELDS</b>				\$ 12.05
Material Cost				\$ 187.99
Installation				49.97
<b>TOTAL COST INSTALLED</b>				\$ 237.96
<b>MUNICIPAL GAS COMPANY, WAXAHACHIE, ELLIS COUNTY, TEXAS, LINE M-3</b>				
<b>METERS</b>				
Foxboro Type 207 Orifice Range 100 in. Differential, 100 lbs. static with 24 hour clock Chart No. 898039 Serial No. A-82058 Company No. 67	1	Each	139.0256	\$ 139.03
Foxboro Type T Differential Re- corder Range 20 in. Differen- tial only with 24 hour clock Chart No. 89863 Serial No. L-1019 Company No. 67-A	1	Each	106.1254	106.13
<b>METER PIPING</b>				
Wide range screwed installation with steel Needle Valves	1	Set	25.1700	25.17
<b>REGULATORS</b>				
Emco 4 in. HP Balanced Valve Serial No. 1324 with 8 in. diaphragm case 6 bolts Flanged	1	Each	155.2250	155.23
Emco 6 in. HP Balanced Valve Serial No. 1039 with 11 in. diaphragm case 6 bolts Flanged	1	Each	241.0000	241.00
<b>Gauges</b>				
Indicating Pressure Foxboro Model J Steel Tube Brass trimmed CI case with 5 in. dial Range 0-500 lbs.	1	Each	12.2788	12.28
Jarecki Brass trimmed CI Case with 5 in. dial Range 0-200 lbs.	1	Each	5.7999	5.80

2485

Form 251 100M 7-53

## TRANSMISSION SYSTEM MEASURING STATION EQUIPMENT

"M" System

5933

LW B	ITEM	QUANTITY	UNIT	UNIT COST	AMOUNT
	<b>MUNICIPAL GAS COMPANY, WAXAHACHIE ELLIS COUNTY, TEXAS, LINE M-3 (Cont'd)</b>				
	<b>GATE VALVES Flanged</b>				
	Atwood 6 in. Style 4-P IBERM DD	1	Each	49.7261	49.73
	NRS with KH CI CFBO	2	Each	35.2632	70.53
	Ludlow 4 in. No. 8 IBERM DD NRS				
	Westcott DD Semi-Steel Bronze				
	Mounted NRS				
	4 in. 500 lbs. WP with KH CI	2	Each	29.2900	58.58
	LE CFBO	1	Each	25.7738	25.77
	4 in. 500 lbs. WP				
	<b>GATE VALVES Screwed</b>				
	Darling IBERM DD NRS	4	Each	23.1346	92.54
	4 in. 700 lbs. T No. 71	1	Each	36.9966	37.00
	6 in. 700 lbs. T No. 71				
	Walworth-Kewanee 3 in. 125 lbs.	1	Each	7.2293	7.23
	WP IBERM Wedge NRS				
	<b>GLOBE VALVES Screwed</b>				
	Crane 1/4 in. 200 lbs. WP Brass	1	Each	.4067	.41
	Lunkenheimer 1/2 in. Brass Std.	2	Each	1.0909	2.18
	<b>NEEDLE VALVES Screwed</b>				
	Lunkenheimer 1/4 in. Brass Std.	1	Each	.6293	.63
	<b>PLUG VALVES Flanged</b>				
	Nordstrom 6 in. 250 lbs. WP with	1	Each	93.4849	93.48
	KH CI CFBO				
	<b>SAFETY VALVES Screwed</b>				
	National Tool Company 3 in.	1	Each	9.2404	9.24
	LAW type Std.				
	<b>PIPE Threaded and Coupled (Random Lengths)</b>	1	Lot		25.54
	<b>PIPE Plain End (Random Lengths)</b>	1	Lot		2.10
	<b>HEADERS</b>				
	6 in. x 5 ft. 4 in. with one	2	Each	20.3200	40.64
	end flat end welded and other				
	end threaded and with 2 4 in.				
	and 1 6 in. welded openings				

2486

Form 751-100M-7-53

## TRANSMISSION SYSTEM MEASURING STATION EQUIPMENT

"M" System

5984

ITEM	QUANTITY	UNIT	UNIT COST	AMOUNT
<b>MUNICIPAL GAS COMPANY, WAXAHACHIE, ELLIS COUNTY, TEXAS, LINE M-3 (Cont'd)</b>				
<b>FITTINGS</b>	1	Lot		\$ 169.75
<b>WELDS</b>	1	Lot		10.17
Material Cost				\$ 1,380.16
Installation				389.08
<b>TOTAL COST INSTALLED</b>				<b>\$ 1,769.24</b>
<b>WAXAHACHIE GAS COMPANY, WAXAHACHIE, ELLIS COUNTY, TEXAS, LINE M-3</b>				
<b>METERS</b>				
Foxboro Type 207 Orifice Range 100 in. Differential 100 lbs. static with 24 hour clock Chart No. 898039 Serial No. A-82040 Company No. 88	1	Each	139.0256	\$ 139.03
Foxboro Type T Differential Re- corder Range 20 in. Differ- ential only with 24 hour clock Chart No. 89863 Serial No. 78110 Company No. 88-A	1	Each	106.1254	106.13
<b>METER PIPING</b>				
Wide Range screwed installation with Lunkenheimer Brass Needle Valves	1	Set	16.8500	16.85
<b>REGULATORS</b>				
Emco 4 in. HP Balanced Valve Serial No. 1383 6 bolts Flanged	1	Each	155.2250	155.23
Fulton 2 in. HP with 7-1/2 in. diaphragm case Screwed	1	Each	54.9600	54.96
<b>GAUGES</b>				
Indicating Pressure Foxboro Model A Brass trimmed CI case with 5 in. dial Range 0-250 lbs.	1	Each	4.3114	4.31

2487

Form 224 100M 7-53

## TRANSMISSION SYSTEM MEASURING STATION EQUIPMENT

W.M. System

5935

ITEM	QUANTITY	UNIT	UNIT COST	AMOUNT
<b>WAXAHACHIE GAS COMPANY, WAXAHACHIE, ELLIS COUNTY, TEXAS, LINE M-3 (Cont'd)</b>				
<b>GAUGES (cont'd)</b>				
Recording Pressure				
Foxboro 10 in. with CI case				
Serial No. A-69515 Chart				
No. 79980 with Foxboro 24				
hour clock				
Range 0-1000 lbs.	1	Each	35.1092	35.11
<b>GATE VALVES Flanged</b>				
Atwood Style 4-P 2 in. 500 lbs.				
WP OS&Y with EH CI LE CFBO	2	Each	19.5378	39.08
Kennedy 4 in. 250 lbs. WEP				
IHEM ID NRS with EH CI CFBO	4	Each	40.1951	160.78
Pratt & Cady IHEM Wedged OS&Y				
4 in. 250 lbs. WP No. 162-A-4				
with EH CI CFBO	1	Each	44.6392	44.64
4 in. 250 lbs. WP No. 162-A-4				
with EH CI LE CFBO	1	Each	44.6392	44.64
<b>GATE VALVES Screwed</b>				
Westcott 2 in. 1200 lbs. WP LE				
IHEM ID NRS	2	Each	19.4032	38.81
<b>NEEDLE VALVES Screwed</b>				
Metric 1/4 in. EH	2	Each	1.2588	2.52
Metric Angle 1/4 in. EH	1	Each	1.2588	1.26
Lunkenheimer 1/2 in. Brass Std.	2	Each	.9069	1.81
<b>SAFETY POP VALVES Screwed</b>				
American 2 in. Female Threaded				
EH CI	1	Each	10.6218	10.62
<b>PIPE Threaded and Coupled (Random Lengths)</b>				
	1	Lot		27.31
<b>CUSHIONS</b>				
6 in. x 37 ft. with one end				
orange peel welded and other				
end 6 x 2 in. sledge welded				
and threaded, 1 2 x 4-1/2 in.				
TOE nipple, 1 2 in. circle				
weld	1	Each	47.1300	47.13
<b>FITTINGS</b>	1	Lot		113.15



2488

## TRANSMISSION SYSTEM MEASURING STATION EQUIPMENT

"M" System

5936-5962

ITEM	QUANTITY	UNIT	UNIT COST	AMOUNT
<b>WAXAHACHIE GAS COMPANY, WAXAHACHIE, ELLIS COUNTY, TEXAS, LINE M-3 (Cont'd)</b>				
<b>WELDS</b>	1	Lot		\$ .45
Material Cost				\$ 1,043.82
Installation				296.31
<b>TOTAL COST INSTALLED</b>				<b>\$ 1,340.13</b>
<b>WAXAHACHIE, ELLIS COUNTY, TEXAS, LINE M-3</b>				
<b>REGULATORS</b>				
Fulton 2 in. HP with 7-1/2 in. diaphragm case no bolts Screwed	1	Each	54.9600	\$ 54.96
<b>GAUGES</b>				
Indicating Pressure Foxboro Brass trimmed CI case with 5 in. dial Range 0-250 lbs.	1	Each	4.3114	4.31
Range 0-500 lbs.	1	Each	4.3114	4.31
<b>GATE VALVES Flanged</b>				
Crane 6 in. 1000 lbs. T OS&Y with KH CI CFEO	1	Each	59.1287	59.13
Pratt & Cady IREM Wedged OS&Y 4 in. 250 lbs. WP No. 162-A-4-6	1	Each	41.1230	41.12
4 in. 250 lbs. WP No. 162-A-4-6 with KH CI CFEO	1	Each	44.6392	44.64
<b>PIPE Plain End (Random Lengths)</b>	1	Lot		2.81
<b>FITTINGS</b>	1	Lot		6.74
<b>WELDS</b>	1	Lot		12.78
Material Cost				\$ 230.80
Installation				61.92
<b>TOTAL COST INSTALLED</b>				<b>\$ 292.72</b>

2489

Form 254 10-22 7-43

## TRANSMISSION SYSTEM MEASURING STATION EQUIPMENT

"M" System

5963

ITEM	QUANTITY	UNIT	UNIT COST	AMOUNT
<b>TERADACAMA, LIVINGSTONE COUNTY, TEXAS, LINE M-11-8 (Cont'd)</b>				
<b>PLUG VALVES Flanged (cont'd)</b>				
Barco				
2 in. Type MC-1 250 lbs. WP with 2 x 6-1/2 in. EH CI 4 bolts C7E0 (50% Owner- ship)	1	Each	14.2677	\$ 7.13
2 in. Type MC-1 250 lbs. WP	2	Each	12.3409	24.68
<b>SAFETY VALVES Screwed</b>				
Crane 2 in. 125 lbs. WP L&W type	1	Each	5.6714	5.67
<b>PIPE Threaded and Coupled (Ran- dom Lengths)</b>				
	1	Lot		2.01
<b>PIPE Plain End (Random Lengths)</b>				
	1	Lot		2.83
<b>HEADERS</b>				
16 x 36 in. with baseball welded ends with 3 2 in. welded openings and 1 1/4 in. welded collar	1	Each	42.3900	42.39
<b>FITTINGS</b>				
	1	Lot		21.95
<b>WELDS</b>				
	1	Lot		22.29
<b>Material Cost</b>				\$ 532.35
<b>Installation</b>				144.85
<b>TOTAL COST INSTALLED</b>				\$ 677.20
<b>SOUTH CORSICANA, NAVARRO COUNTY, TEXAS, LINE M-13</b>				
<b>METERS</b>				
Vestcoatt Orifice Bristol case 100 in. Differential and static with 24 hour clock Serial No. 14645 Company No. 1204	1	Each	130.3262	\$ 130.33
Vestcoatt Differential Recorder Bristol case 20 in. differen- tial only with 24 hour clock Serial No. 16147 Company No. 1204-A	1	Each	113.7437	113.74

2490

## TRANSMISSION SYSTEM MEASURING STATION EQUIPMENT

"M" System

5964

ITEM	QUANTITY	UNIT	UNIT COST	AMOUNT
<u>SOUTH CORSICANA, NAVARRO COUNTY,</u> <u>TEXAS, LINE M-13 (Cont'd)</u>				
METER PIPING				
Wide Range screwed installation with steel Needle Valves	1	Set	25.1700	\$ 25.17
FITTINGS	1	Lot		36.68
WELDS	1	Lot		.45
Material Cost				\$ 306.37
Installation				86.88
TOTAL COST INSTALLED				\$ 393.25
<u>SOUTH CORSICANA, NAVARRO COUNTY,</u> <u>TEXAS, LINE M-13</u>				
REGULATORS				
Fulton 2 in. HP with 7-1/2 in. diaphragm case no bolts Screwed	1	Each	54.9600	\$ 54.96
Fulton 4 in. HP with 9-1/2 in. diaphragm case 4 bolts Flanged	1	Each	122.5890	122.59
GAUGES				
Indicating Pressure				
Crosby Iron Body ER with 5 in. dial Range 0-250 lbs.	1	Each	3.7586	3.76
Foxboro Iron Body ER with 5 in. dial Range 0-500 lbs.	1	Each	4.3114	4.31
GATE VALVES Flanged				
Crane 8 in. 250 lbs. WP IIBM Wedge OS&Y with 8 x 15 in. EM CI 12 bolts CFBO	1	Each	112.2924	112.29
Pratt & Cady 8 in. 250 lbs. WP IIBM Steel Stem Wedge OS&Y with 8 x 15 in. EM CI LE 12 bolts CFBO	2	Each	105.1313	210.26
GATE VALVES Screwed				
Crane RS Brass				
3/8 in. 125 lbs. WP	1	Each	.5851	.59
1/2 in. 125 lbs. WP	1	Each	.6687	.67

2491

Form 284-100M-7-53

## TRANSMISSION SYSTEM MEASURING STATION EQUIPMENT

"M" System

5965-5976

ITEM	QUANTITY	UNIT	UNIT COST	AMOUNT
<u>SOUTH CORSICANA, NAVARRO COUNTY, TEXAS. LINE M-13 (Cont'd)</u>				
GLOBE VALVES Screwed Walworth 1/4 in. 125 lbs. WP Brass	1	Each	.4067	\$ .41
PIPE Threaded and Coupled (Random Lengths)	1	Lot		20.48
PIPE Plain End (Random Lengths)	1	Lot		7.32
CUSHIONS 18 x 132 in. with baseball welded ends with 2 4 in. welded openings and 1 1/4 in. welded collar	1	Each	69.2800	69.28
FITTINGS	1	Lot		35.95
WELDS	1	Lot		62.14
Material Cost				\$ 705.01
Installation				182.57
TOTAL COST INSTALLED				\$ 887.58
<u>MILFORD, ELLIS COUNTY, TEXAS, LINE M-14</u>				
METERS Emco No. 4 50 lbs. T Serial No. B-5961 with Emco combined PVMT Recording Gauge Serial No. 134086 0-50 lbs. static with 7 day Emco clock	1	Each	267.1664	\$ 267.17
REGULATORS Fulton 1 in. HP with 5-1/2 in. diaphragm case 4 bolts Screwed	1	Each	18.0550	18.06
Fulton 1-1/4 in. HP with 7-1/4 in. diaphragm case 4 bolts Screwed	1	Each	22.1000	22.10

2432

## TRANSMISSION SYSTEM MEASURING STATION EQUIPMENT

"W" System

5977

ITEM	QUANTITY	UNIT	UNIT COST	AMOUNT
<b>CORSICANA CLUB, NAVARRO COUNTY, TEXAS, LINE M</b>				
<b>METERS</b>				
Emco No. 2 50 lbs. T Serial No. 731875 with Foxboro combined P V&T Recording Gauge Serial No. F-851 0-50 lbs. static with 7 day Foxboro clock	1	Each	153.8788	\$ 153.88
<b>REGULATORS</b>				
Emco 1 in. HP with 7 in. diaphragm case Field type Screwed	1	Each	12.7500	12.75
Fulton 1-1/4 in. HP with 11-1/2 in. diaphragm case 4 bolts Screwed	1	Each	22.1000	22.10
<b>GAUGES</b>				
Indicating Pressure Foxboro Iron Body BR with 5 in. dial Range 0-60 lbs.	1	Each	4.3114	4.31
<b>GLOBE VALVES Screwed</b>				
Crane 1/4 in. 125 lbs. WP Brass	1	Each	.4067	.41
<b>NEEDLE VALVES Screwed</b>				
Lunkenheimer 1/4 in. 125 lbs. WP Brass	1	Each	.6293	.63
<b>SAFETY VALVES Screwed</b>				
Crane 1 in. Set 40 Brass Std.	1	Each	1.0325	1.03
<b>PIPE Threaded and Coupled (Random Lengths)</b>				
	1	Lot		.38
<b>FITTINGS</b>				
	1	Lot		20.73
Material Cost				\$ 216.22
Installation				61.41
<b>TOTAL COST INSTALLED</b>				<b>\$ 277.63</b>

2493

Form 214-100M-7-58

## TRANSMISSION SYSTEM MEASURING STATION EQUIPMENT

"M" System

5978

L B	ITEM	QUANTITY	UNIT	UNIT COST	AMOUNT
	<b>HOMA OELA TEXAS COMPANY, McGRAW LEASE, NAVARRO COUNTY, TEXAS, LINE M</b>				
	<b>METERS</b>				
	Emco No. 4 500 lbs. T Serial No. 7382 with Foxboro combined PW&T Recording Gauge No. F- 277 0-500 lbs. static with 7 day Foxboro clock	1	Each	406.7500	\$ 406.75
	<b>GATE VALVES</b> Screwed Crane 2 in. 125 lbs. WP IRBM Wedge NRS	6	Each	5.0534	30.32
	<b>PIPE</b> Threaded and Coupled (Ran- dom Lengths)	1	Lot		1.72
	<b>FITTINGS</b>	1	Lot		21.67
	Material Cost				\$ 460.46
	Installation				130.77
	<b>TOTAL COST INSTALLED</b>				\$ 591.23
	<b>G. C. KENT, ANGUS LEASE, NAVARRO COUNTY, TEXAS, LINE M</b>				
	<b>METERS</b>				
	Emco No. 2-1/2 500 lbs. T Serial No. 2642 with Foxboro combined PV&T Recording Gauge No. F-315 0-80 lbs. static with Foxboro 7 day clock	1	Each	209.5530	\$ 209.55
	<b>REGULATORS</b>				
	Emco 1 in. HP with 7 in diaph- ragm case Field type Screwed	1	Each	12.7500	12.75
	<b>GATE VALVES</b> Screwed Crane 2 in. 125 lbs. WP	3	Each	5.0534	15.16
	<b>SAFETY POP VALVES</b> Screwed Crane 1 in. Set 50 for Air No. 3-1148 Brass Std.	1	Each	5.6714	5.67
	<b>PIPE</b> Threaded and Coupled (Ran- dom Lengths)	1	Lot		2.29

2194

## TRANSMISSION SYSTEM MEASURING STATION EQUIPMENT

"M" System

5979

ITEM	QUANTITY	UNIT	UNIT COST	AMOUNT
<b>G. C. KENT, ANGUS LEASE, NAVARRO COUNTY, TEXAS, LINE M.</b>				
<b>FITTINGS</b>	1	Lot		\$ 43.45
Material Cost				\$ 288.87
Installation				82.03
<b>TOTAL COST INSTALLED</b>				\$ 370.90
<b>PURE OIL COMPANY, COLE AND McGRAW LEASE, LIMESTONE COUNTY, TEXAS, LINE M.</b>				
<b>METERS</b>				
Emco No. 2-1/2 500 lbs. T Serial No. 2630 with Foxboro combined PV&T Recording Gauge No. F-332 0-500 lbs. static with 7 day Foxboro clock	1	Each	209.5530	\$ 209.55
<b>GATE VALVES</b> Screwed Crane 2 in. 125 lbs. WP Wedge NRS	6	Each	5.0534	30.32
<b>PIPE</b> Threaded and Coupled (Random Lengths)	1	Lot		1.41
<b>FITTINGS</b>	1	Lot		19.01
Material Cost				\$ 260.29
Installation				73.92
<b>TOTAL COST INSTALLED</b>				\$ 334.21
<b>E. L. SMITH OIL CORPORATION, McGRAW LEASE, NAVARRO COUNTY, TEXAS, LINE M.</b>				
<b>METERS</b>				
Emco No. 2-1/2 500 lbs. T Serial No. 2589 with Foxboro combined PV&T Recording Gauge No. F-254 0-500 lbs. static with 7 day Foxboro clock	1	Each	209.5530	\$ 209.55



2495

Form 104-100M-7-61

## TRANSMISSION SYSTEM MEASURING STATION EQUIPMENT

"M" System

5980

L R	ITEM	QUANTITY	UNIT	UNIT COST	AMOUNT
	<u>E. L. SMITH OIL CORPORATION, McGRAN LEASE, NAVARRO COUNTY, TEXAS, LINE M (Cont'd)</u>				
	GATE VALVES Screwed Crane 2 in. 125 lbs. WP IRHM Wedge HRS	6	Each	5.0534	\$ 30.32
	PIPE Threaded and Coupled (Random Lengths)	1	Lot		1.38
	FITTINGS	1	Lot		27.14
	Material Cost				\$ 268.39
	Installation				76.23
	TOTAL COST INSTALLED				\$ 344.62
	<u>SNOWDEN AND McSWINEY, LONGBOOTHAM LEASE, FREESTONE COUNTY, TEXAS, LINE M</u>				
	METERS Emco No. 2-1/2 500 lbs. T Serial No. 2582 with Foxboro combined PVAT Recording Gauge No. F-249 0-500 lbs. static with 7 day Foxboro clock	1	Each	209.5530	\$ 209.55
	GATE VALVES Screwed Crane 2 in. 125 lbs. WP IRHM Wedge HRS	6	Each	5.0534	30.32
	PIPE Threaded and Coupled (Random Lengths)	1	Lot		1.41
	FITTINGS	1	Lot		19.69
	Material Cost				\$ 260.97
	Installation				73.12
	TOTAL COST INSTALLED				\$ 334.09

2496

## TRANSMISSION SYSTEM MEASURING STATION EQUIPMENT

"M" System

6981

ITEM	QUANTITY	UNIT	UNIT COST	AMOUNT
<b>MOSS &amp; URSCHKE, FREEMAN LEASE, LIMESTONE COUNTY, TEXAS, LINE M-11</b>				
<b>METERS</b>				
Emco No. 3 100 lbs. T Serial No. 8029 with Foxboro combined PV&T Recording Gauge No. F-171 0-50 lbs. static with 7 day Foxboro clock	1	Each	229.7000	\$ 229.70
<b>REGULATORS</b>				
Emco 1 in. HP with 7 in. diaph- ragm case Field type Screwed	1	Each	12.7500	12.75
<b>GATE VALVES Screwed</b>				
Crane 2 in. 125 lbs. WP IRHM	6	Each	5.0534	30.32
<b>SAFETY VALVES Screwed</b>				
Crane 1 in. 125 lbs. WP L&W type Brass	1	Each	2.0637	2.06
<b>PIPE Threaded and Coupled (Ran- dom Lengths)</b>				
	1	Lot		.92
<b>FITTINGS</b>				
	1	Lot		28.99
Material Cost				\$ 304.74
Installation				86.55
<b>TOTAL COST INSTALLED</b>				\$ 391.29
<b>STATION 353 PLUS 73, MID-KANSAS OIL &amp; REFINING COMPANY, LIMESTONE COUNTY, TEXAS, LINE M-11</b>				
<b>GLOBE VALVES Screwed</b>				
Lunkenhelmer 1/2 in. Brass Std.	2	Each	1.4353	\$ 2.87
<b>PIPE Threaded and Coupled (Ran- dom Lengths)</b>				
	1	Lot		.33
<b>FITTINGS</b>				
	1	Lot		30.28
Material Cost				\$ 33.48
Installation				9.51
<b>TOTAL COST INSTALLED</b>				\$ 42.99

2497

Form 564 1-15-54 7-44

## TRANSMISSION SYSTEM MEASURING STATION EQUIPMENT

"M" System

5982

LN	ITEM	QUANTITY	UNIT	UNIT COST	AMOUNT
B					
	<u>CONTINENTAL OIL COMPANY, HARWELL</u> <u>LEASE, NAVARRO COUNTY, TEXAS,</u> <u>LINE M-15</u>				
	<b>METERS</b>				
	Emco No. 2-1/2 500 lbs. T Serial No. 2581 with Foxboro combined PV&T Recording Gauge No. F-250 0-500 lbs. with 7 day Foxboro clock	1	Each	209.5530	\$ 209.55
	<b>REGULATORS</b>				
	Emco 1-1/2 in. HP Field type Inlet pressure 300 lbs. Delivery pressure 30 lbs. Screwed	1	Each	12.7500	12.75
	<b>GATE VALVES</b> Screwed				
	Crane 2 in. 125 lbs. WP IRBM Wedge NRS	6	Each	5.0534	30.32
	<b>PIPE</b> Threaded and Coupled (Ran- dom Lengths)	1	Lot		.92
	<b>FITTINGS</b>	1	Lot		20.91
	Material Cost				\$ 274.45
	Installation				77.95
	<b>TOTAL COST INSTALLED</b>				\$ 352.40
	<u>J. F. JACKSON TRACT, NAVARRO</u> <u>COUNTY, TEXAS, LINE M-15</u>				
	<b>REGULATORS</b>				
	Fulton 2 in. HP with 7-1/2 in. diaphragm case no bolts Screwed	1	Each	54.9600	\$ 54.96
	<b>GAUGES</b>				
	Indicating Pressure Ashcroft Iron Body IR with 5 in. dial Range 0-200 lbs. No. 7590B022	1	Each	2.1692	2.17
	<b>GATE VALVES</b> Screwed				
	Crane 2 in. 125 lbs. WP IRBM Wedge NRS	2	Each	5.0534	10.11
	Ladlow 2 in. No. 8 IRBM DD LE NRS	2	Each	19.5904	39.18

## TRANSMISSION SYSTEM MEASURING STATION EQUIPMENT

"M" System

5983

L R	ITEM	QUANTITY	UNIT	UNIT COST	AMOUNT
	<u>J. F. JACKSON TRACT, NAVARRO COUNTY, TEXAS, LINE M-15 (Cont'd)</u>				
	GLOBE VALVES Screwed Jenkins 1/4 in. 300 lbs. WP Brass	1	Each	.7965	.80
	PIPE Threaded and Coupled ( Ran- dom Lengths)	1	Lot		3.88
	FITTINGS	1	Lot		9.76
	Material Cost				\$ 120.86
	Installation				34.32
	TOTAL COST INSTALLED				\$ 155.18
	<u>SINCE OIL COMPANY, ROSE LEASE, NAVARRO COUNTY, TEXAS, LINE M-15</u>				
	METERS				
	Emco No. 4 500 lbs. T Serial No. 5220 with Foxboro combined PV&T Recording Gauge No.F-279 0-500 lbs. static with 7 day Foxboro clock	1	Each	406.7500	\$ 406.75
	GATE VALVES Screwed Crane 2 in. 125 lbs. WP IBBM Wedge NRS	6	Each	5.0534	30.32
	Lunkenheimer Clip 1-1/4 in. 100 lbs. WP IBBM Wedge RB	1	Each	1.6841	1.68
	PIPE Threaded and Coupled (Ran- dom Lengths)	1	Lot		2.69
	FITTINGS	1	Lot		25.59
	Material Cost				\$ 467.03
	Installation				132.64
	TOTAL COST INSTALLED				\$ 599.67

2499

Form 214-100M-7-53

## TRANSMISSION SYSTEM MEASURING STATION EQUIPMENT

"M" System

5984

L B	ITEM	QUANTITY	UNIT	UNIT COST	AMOUNT
	SKELLY OIL COMPANY, CARRILL LEASE, NAVARRO COUNTY, TEXAS, LINE M-15				
	METERS				
	Emco No. 2-1/2 500 lbs. T Serial No. 2569 with Foxboro combined PV&T Recording Gauge No. F-274 0-250 lbs. static with 7 day Foxboro clock	1	Each	209.5530	\$ 209.55
	GATE VALVES Screwed				
	Crane 2 in. 125 lbs. WP IBBM Wedge NRS	6	Each	5.0534	30.32
	PIPE Threaded and Coupled (Ran- dom Lengths)	1	Lot		.99
	FITTINGS	1	Lot		21.40
	Material Cost				\$ 262.26
	Installation				74.48
	TOTAL COST INSTALLED				\$ 336.74
	STATION 117 PLUS 10, GARARD CORPORATION, NAVARRO COUNTY, TEXAS, LINE M-15-2				
	METERS				
	Foxboro type 207 Orifice Range 100 in. Differential 100 lbs. static with 7 day Jeweled clock Chart No. 899039 Serial No. A-82056 Company No. 1284	1	Each	150.4956	\$ 150.50
	METER PIPING				
	Single screwed installation with steel Needle Valves throughout	1	Each	23.1700	23.17
	REGULATORS				
	Fulton 2 in. HP with 7-1/2 in. diaphragm case no bolts Screwed	1	Each	54.9600	54.96
	GAUGES				
	Indicating Pressure Foxboro Iron Body BR with 5 in. dial Range 0-500 lbs.	1	Each	4.3114	4.31

2500

## TRANSMISSION SYSTEM MEASURING STATION EQUIPMENT

"M" System

5985

ITEM	QUANTITY	UNIT	UNIT COST	AMOUNT
STATION 117 PLUS 10, GARARD CORPORATION, HAVARRO COUNTY, TEXAS, LINE M-15-2 (Cont'd)				
GATE VALVES Flanged				
Walworth IHEM ID OS&Y				
4 in. 700 lbs. T with 4 x 10 in. EH CI LE 8-bolts CFBO	3	Each	32.2646	\$ 96.79
4 in. 700 lbs. T with 2 x 10 in. EH CI 8 bolts CFBO	1	Each	32.2646	32.26
NEEDLE VALVES Screwed				
Lunkensheimer 1/4 in. Brass Std.	1	Each	.6293	.63
PLUG VALVES Flanged				
Barco 2 in. 250 lbs. WP Type MC-1 with 2 x 6-1/2 in. EH CI 4 bolts CFBO	2	Each	14.2677	28.54
PIPE Threaded and Coupled (Random Lengths)				
	1	Lot		9.10
PIPE Plain End ( Random Lengths)				
	1	Lot		4.25
FITTINGS				
	1	Lot		23.37
WELDS				
	1	Lot		18.34
Material Cost				\$ 446.22
Installation				121.52
TOTAL COST INSTALLED				\$ 567.74
GULF PRODUCTION COMPANY, J. B. BUSH LEASE, HAVARRO COUNTY, TEXAS, LINE M-15-2				
METERS				
Emco No. 2-1/2 500 lbs. T Serial No. A-3080 with Emco combined PV&T Recording Gauge Serial No. 147624 0-500 lbs. static with 7 day Emco clock	1	Each	219.6380	\$ 219.64
GATE VALVES Screwed				
Crane 2 in. 125 lbs. WP IHEM Wedge MRS	4	Each	5.0534	20.21
Walworth 2 in. 125 lbs. WP IHEM Wedge MRS	2	Each	5.1255	10.25

2501

Form 284-100M-7-53

## TRANSMISSION SYSTEM MEASURING STATION EQUIPMENT

"K" System

5986

L B-	ITEM	QUANTITY	UNIT	UNIT COST	AMOUNT	L B
	<u>STATION 70 PLUS 39, MOSS &amp; URSCHEL, I.H. CEFY LEASE, NAVARRO COUNTY TEXAS, LINE M-15-2 (Cont'd)</u>					
	GATE VALVES Screwed Crane 2 in. 125 lbs. WP IBBM Wedge NRS	6	Each	5.0534	\$ 30.32	
	PIPE Threaded and Coupled (Ran- dom Lengths)	1	Lot		1.32	
	FITTINGS	1	Lot		21.83	
	Material Cost				\$ 263.02	
	Installation				74.70	
	TOTAL COST INSTALLED				\$ 337.72	
	<u>STATION 47 PLUS 39, STROUBE &amp; STROUBE, HILL LEASE, NAVARRO COUNTY, TEXAS, LINE M-15-2</u>					
	METERS Emco No. 2-1/2 500 lbs. T Serial No. 2570 with Foxboro PV&T Recording Gauge Serial No. F-334 0-500 lbs. static with 7 day Foxboro clock	1	Each	209.5530	\$ 209.55	
	GATE VALVES Screwed Crane 2 in. 125 lbs. WP IBBM Wedge NRS	6	Each	5.0534	30.32	
	PIPE Threaded and Coupled (Ran- dom Lengths)	1	Lot		1.29	
	FITTINGS	1	Lot		23.20	
	Material Cost				\$ 264.36	
	Installation				75.07	
	TOTAL COST INSTALLED				\$ 339.43	



## TRANSMISSION SYSTEM MEASURING STATION EQUIPMENT

"M" System

5987

ITEM	QUANTITY	UNIT	UNIT COST	AMOUNT
<b>GULF PRODUCTION COMPANY, J. B. BUSH LEASE, NAVARRO COUNTY, TEXAS, LINE M-15-2 (Cont'd)</b>				
PIPE Threaded and Coupled (Random Lengths)	1	Lot		\$ 1.36
FITTINGS	1	Lot		21.50
Material Cost				\$ 272.96
Installation				77.51
TOTAL COST INSTALLED				\$ 350.47
<b>STATION 116 PLUS 67, MAGNOLIA PETROLEUM COMPANY, NAVARRO COUNTY, TEXAS, LINE M-15-2</b>				
<b>METERS</b>				
Emco No. 2-1/2 500 lbs. T Serial No. 2544 with Foxboro PV&T Recording Gauge Serial No. F-227 0-500 lbs. static with 7 day Foxboro clock	1	Each	209.5530	\$ 209.55
GATE VALVES Screwed Crane 2 in. 125 lbs. WP IBBM Wedge WRS	6	Each	5.0534	30.32
PIPE Threaded and Coupled (Random Lengths)	1	Lot		1.41
FITTINGS	1	Lot		17.37
Material Cost				\$ 258.65
Installation				73.46
TOTAL COST INSTALLED				\$ 332.11
<b>STATION 70 PLUS 39, MOSS &amp; URSCHKE, I. N. CERY LEASE, NAVARRO COUNTY, TEXAS, LINE M-15-2</b>				
<b>METERS</b>				
Emco No. 2-1/2 500 lbs. T Serial No. 2551 with Foxboro PV&T Re- cording Gauge Serial No. F-234 0-500 lbs. static with 7 day Foxboro clock	1	Each	209.5530	\$ 209.55

2503

Form 354-100M-1-31

## TRANSMISSION SYSTEM MEASURING STATION EQUIPMENT

"M" System

5988

L B	ITEM	QUANTITY	UNIT	UNIT COST	AMOUNT
	<b>STATION 116 PLUS 55.5, PURE OIL COMPANY, MCKIE LEASE, NAVARRO COUNTY, TEXAS, LINE M-15-2</b>				
	<b>METERS</b>				
	Emco No. 4 500 lbs. T Serial No. 9455 with Foxboro PV&T Recording Gauge Serial No. F-274 0-500 lbs. static with 7 day Foxboro clock	1	Each	406.7500	\$ 406.75
	<b>GATE VALVES</b> Screwed Crane 2 in. 125 lbs. WP IRBM Wedge NRS	6	Each	5.0534	30.32
	<b>PIPE</b> Threaded and Coupled (Random Lengths)	1	Lot		1.99
	<b>FITTINGS</b>	1	Lot		38.64
	Material Cost				\$ 477.70
	Installation				135.67
	<b>TOTAL COST INSTALLED</b>				\$ 613.37
	<b>STATION 116 PLUS 78, SPANSCO OIL AND ROYALTY COMPANY, NAVARRO COUNTY, TEXAS, LINE M-15-2</b>				
	<b>METERS</b>				
	Emco No. 2-1/2 500 lbs. T Serial No. 2583 with Foxboro PV&T Recording Gauge Serial No. F-229 0-500 lbs. static with Foxboro 7 day clock	1	Each	209.5530	\$ 209.55
	<b>GATE VALVES</b> Screwed Crane 2 in. 125 lbs. WP IRBM Wedge NRS	6	Each	5.0534	30.32
	<b>PIPE</b> Threaded and Coupled (Random Lengths)	1	Lot		1.38
	<b>FITTINGS</b>	1	Lot		15.13
	Material Cost				\$ 256.38
	Installation				72.82
	<b>TOTAL COST INSTALLED</b>				\$ 329.20

## TRANSMISSION SYSTEM MEASURING STATION EQUIPMENT

"M" System

5989

ITEM	QUANTITY	UNIT	UNIT COST	AMOUNT
<b>STATION 108 PLUS 05, SIMMS OIL COMPANY, BOYD LEASE, NAVARRO COUNTY, TEXAS, LINE M-15-4</b>				
<b>METERS</b>				
Emco No. 2-1/2 500 lbs. T Serial No. 2547 with Foxboro combined PV&T Recording Gauge No. F-230 0-500 lbs. static with 7 day Foxboro clock	1	Each	209.5530	\$ 209.55
<b>GATE VALVES Screwed</b>				
Crane 2 in. 125 lbs. WP IBBM Wedge NRS	5	Each	5.0534	25.27
Walworth 2 in. 125 lbs. WP IBBM Wedge NRS	1	Each	5.1255	5.13
<b>PIPE Threaded and Coupled (Random Lengths)</b>				
	1	Lot		.92
<b>FITTINGS</b>				
	1	Lot		33.08
Material Cost				\$ 273.95
Installation				77.80
<b>TOTAL COST INSTALLED</b>				<b>\$ 351.75</b>
<b>STATION 54 PLUS 35, DON S. FOSTER, MILLS LEASE, LIMESTONE COUNTY, TEXAS, LINE M-21</b>				
<b>METERS</b>				
Emco No. 2-1/2 500 lbs. T Serial No. 2542 with Foxboro PV&T Recording Gauge Serial No. F-335 0-80 lbs. static with 7 day Foxboro clock	1	Each	209.5530	\$ 209.55
<b>REGULATORS</b>				
Emco 1-1/2 in. HP Inlet Pressure 600 lbs. Delivery Pressure 10-75 lbs. with 8 in. diaphragm case Screwed	1	Each	12.7500	12.75
<b>GATE VALVES Screwed</b>				
Crane 2 in. 125 lbs. WP IBBM Wedge NRS	6	Each	5.0534	30.32
<b>PIPE Threaded and Coupled (Random Lengths)</b>				
	1	Lot		.97

2505

Form 54-100M-7-81

## TRANSMISSION SYSTEM MEASURING STATION EQUIPMENT

"M" System

5990

LINE	ITEM	QUANTITY	UNIT	UNIT COST	AMOUNT
B					
	STATION 54 PLUS 35, DON S. FOSTER, MILLS LEASE, LIMESTONE COUNTY, TEXAS, LINE M-21 (Cont'd)				
	FITTINGS	1	Lot		\$ 25.52
	Material Cost				\$ 279.11
	Installation				79.26
	TOTAL COST INSTALLED				\$ 358.37
	STATION 49 PLUS 79, SIMMS OIL COMPANY, REID LEASE, LIMESTONE COUNTY, TEXAS, LINE M-21				
	METERS				
	Emco No. 2-1/2 500 lbs. T Serial No. 2591 with Foxboro PV&T Recording Gauge Serial No. F-261 0500 lbs. static with 7 day Foxboro clock	1	Each	209.5530	\$ 209.55
	GATE VALVES Screwed				
	Crane 2 in. 125 lbs. WP IBBM	6	Each	5.0534	30.32
	Wedge MRS				
	Lunkenheimer Clip 1-1/4 in. 100 lbs. WP	1	Each	1.6841	1.68
	PIPE Threaded and Coupled (Ran- dom Lengths)	1	Lot		1.00
	FITTINGS	1	Lot		18.71
	Material Cost				\$ 261.26
	Installation				74.20
	TOTAL COST INSTALLED				\$ 335.46

2506

Form 204-100M-7-53

## TRANSMISSION SYSTEM MEASURING STATION EQUIPMENT

"M" System

5991

L B	ITEM	QUANTITY	UNIT	UNIT COST	AMOUNT
	<b>STATION 55 PLUS 26, STANDARD PIPE AND SUPPLY COMPANY, ROLLER LEASE, LIMESTONE COUNTY, TEXAS, LINE M-21</b>				
	<b>METERS</b>				
	Emco No. 2-1/2 500 lbs. T Serial No. 2634 with Foxboro PV&T Recording Gauge Serial No. F-251 0-500 lbs. static with 7 day Foxboro clock	1	Each	209.5530	\$ 209.55
	<b>GATE VALVES Screwed</b>				
	Crane 2 in. 125 lbs. WP IBBM Wedge NRS	6	Each	5.0534	30.32
	<b>PIPE Threaded and Coupled (Ran- dom Lengths)</b>	1	Lot		1.06
	<b>FITTINGS</b>	1	Lot		22.74
	Material Cost				\$ 263.67
	Installation				74.89
	<b>TOTAL COST INSTALLED</b>				\$ 338.56
	<b>STATION 36 PLUS 62, TEXAS COMPANY, LEWIS LEASE, LIMESTONE COUNTY, TEXAS, LINE M-21</b>				
	<b>METERS</b>				
	Emco No. 2-1/2 500 lbs. T Serial No. 2592 with Foxboro PV&T Recording Gauge Serial No. F-260 0-500 lbs. static with 7 day Foxboro clock	1	Each	209.5530	\$ 209.55
	<b>GATE VALVES Screwed</b>				
	Crane 2 in. 125 lbs. WP IBBM Wedge NRS	6	Each	5.0534	30.32
	<b>PIPE Threaded and Coupled (Ran- dom Lengths)</b>	1	Lot		.88
	<b>FITTINGS</b>	1	Lot		24.14
	Material Cost				\$ 264.89
	Installation				75.23
	<b>TOTAL COST INSTALLED</b>				\$ 340.12

2507

Form 24-100M-1-43

## TRANSMISSION SYSTEM MEASURING STATION EQUIPMENT

5892

\*M System

IN B	ITEM	QUANTITY	UNIT	UNIT COST	AMOUNT
	<u>MOSE &amp; URSCHIEL, THOMPSON LEASE, LIMESTONE COUNTY, TEXAS, LINE M-21-4</u>				
	<u>METERS</u>				
	Emco No. 2-1/2 500 lbs. T Serial No. 2546 with Foxboro combined PV&T Recording Gauge No. F-225 0-500 lbs. static with 7 day Foxboro clock	1	Each	209.5530	\$ 209.55
	<u>GATE VALVES</u> Screwed Crane 2 in. 125 lbs. WP IBBM Wedge HRS	6	Each	5.0534	30.32
	<u>PIPE</u> Threaded and Coupled ( Ran- dom Lengths)	1	Lot		2.29
	<u>FITTINGS</u>	1	Lot		18.03
	Material Cost				\$ 260.19
	Installation				73.90
	<u>TOTAL COST INSTALLED</u>				\$ 334.09
	<u>STATION 43 PLUS 99, SIMMS OIL COMPANY, GORDON LEASE, NAVARRO COUNTY, TEXAS, LINE M-22</u>				
	<u>METERS</u>				
	Emco No. 2-1/2 500 lbs. T Serial No. 2547 with Foxboro PV&T Recording Gauge Serial No. F-230 0-500 lbs. static with Foxboro 7 day clock	1	Each	209.5530	\$ 209.55
	<u>GATE VALVES</u> Screwed Crane 2 in. 125 lbs. WP IBBM Wedge HRS	4	Each	5.0534	20.21
	Westcott 2 in. 500 lbs. T IBBM ID HRS LE	2	Each	8.7736	17.55
	<u>PIPE</u> Threaded and Coupled (Ran- dom Lengths)	1	Lot		1.23

2503

## TRANSMISSION SYSTEM MEASURING STATION EQUIPMENT

"M" System

5993-6011

ITEM	QUANTITY	UNIT	UNIT COST	AMOUNT
<u>STATION 43 PLUS 99, SIMMS OIL COMPANY, GORDON LEASE, NAVARRO COUNTY, TEXAS, LINE M-22 (Cont'd)</u>				
<b>FITTINGS</b>	1	Lot		\$ 27.97
Material Cost				\$ 276.51
Installation				78.53
<b>TOTAL COST INSTALLED</b>				\$ 355.04
<u>STATION O PLUS 71, JUNCTION LINES L AND M, CLEBURNE, JOHNSON COUNTY, TEXAS, LINE M</u>				
<b>METERS</b>				
Foxboro Type C Orifice Range 100 in. Differential 500 lbs. static with 24 hour clock Chart No. 85828 Serial No. 60067 Company No. 49	1	Each	141.2682	\$ 141.27
<b>METER PIPING</b>				
Single screwed installation with steel Needle Valves throughout	1	Set	23.1700	23.17
<b>FITTINGS</b>	1	Lot		33.74
Material Cost				\$ 198.18
Installation				56.29
<b>TOTAL COST INSTALLED</b>				\$ 254.47
<u>JUNCTION LINES L AND M, CLEBURNE, JOHNSON COUNTY, TEXAS, LINE M</u>				
<b>REGULATORS</b>				
Fulton 6 in. HP with 10-1/2 in. diaphragm case 8 bolts with 6 x 11 in. EH CI LE CFBO	1	Each	206.1370	\$ 206.14
<b>GATE VALVES Flanged</b>				
Darling 6 in. 1000 lbs. T No. 102 IIRBM ID NRS with EH CI CFBO	2	Each	51.1676	102.34
Westcott 10 in. 800 lbs. WP IIRBM ID NRS with EH CI LE CFBO	1	Each	231.7833	231.78



2509

Form 554-106M-1-54

## TRANSMISSION SYSTEM MEASURING STATION EQUIPMENT

"O" System

6012-6025

LW R	ITEM	QUANTITY	UNIT	UNIT COST	AMOUNT
	LISBON, DALLAS COUNTY, TEXAS, LINE O-01				
	REGULATORS				
	Emco 8 in. HP Balanced Valve L-X63B Serial No. 2775 with 8-1/4 in. diaphragm case, 6 bolts Flanged	1	Each	379.5000	379.50
	GAUGES				
	Foxboro Test Aluminum Case with 4-1/2 in. Dial Range 0-500 lbs.	1	Each	16.4144	16.41
	GATE VALVES Flanged				
	Chapman 8 in. 150 lbs. OWG OS&Y Brass Stem CFBO	6	Each	45.7228	274.34
	Crane OS&Y				
	4 in. 700 lbs. T DD CFBO	1	Each	32.3367	32.34
	6 in. 1000 lbs. T DD Steel Stem CFBO	2	Each	59.1287	118.26
	8 in. 175 lbs. WP Steel Stem	1	Each	62.0047	62.05
	8 in. 175 lbs. WP Steel Stem with 8 x 15 x 1-5/8 in. KH CI CFBO	3	Each	69.7953	209.39
	GLOBE VALVES Screwed				
	Crane 1/2 in. 125 lbs. WP Brass	2	Each	.5689	1.14
	NEEDLE VALVES Screwed				
	Lunkenheimer Brass				
	1/4 in. Std.	1	Each	.6293	.63
	1/2 in. Std.	1	Each	.9069	.91
	Metric 1/4 in. Std.	1	Each	1.2588	1.26
	RELIEF VALVES Flanged				
	Emco Differential Automatic 8 in. No. 156 Rolling Weight Type	1	Each	736.5000	736.50
	PIPE Threaded and Coupled (Random Lengths)	1	Lot		1.34
	PIPE Plain End (Random Lengths)	1	Lot		96.38
	HEADERS				
	10 in. x 10 ft. 7 in. with pointed welded ends with 1- 10 in. welded openings, 3- 8 in. welded openings	1	Each	65.9000	65.90

2510

## TRANSMISSION SYSTEM MEASURING STATION EQUIPMENT

"O" System

6026-6031

ITEM	QUANTITY	UNIT	UNIT COST	AMOUNT
TERRELL, KAUFMAN COUNTY, TEXAS LINE 0-3				
METERS				
Foxboro Type C Orifice Meter, Range 100 in. Differential 250 lbs. Static with 24 hour clock Chart No. 85840, Serial No. 59124, Company No. 1120	1	Each	133.5948	133.59
Foxboro Type T Differential Recorder Range 20 in. Differen- tial only with 24 hour clock, Chart No. 89863, Serial No. 48339 Company No. 1120-A	1	Each	106.1254	106.13
METER PIPING				
Wide Range Screwed Installation with Steel Needle Valves	1	Set	25.1700	25.17
REGULATORS				
Fulton 2 in. HP with 7-1/2 in. Diaphragm Case Screwed	2	Each	54.9600	109.92
GAUGES				
Indicating Pressure Foxboro HR CI Case, 5 in. Dial Range 0-250 lbs.	1	Each	4.3114	4.31
Recording Pressure Foxboro CI Case and Rim, 10 in. Chart No. 79877, Serial No. 128636, 7 day clock Range 0-500 lbs.	1	Each	46.5752	46.58
GATE VALVES Flanged				
Crane Brass Stem OS&Y 6 in. 700 lbs. T.	2	Each	45.5755	91.15
6 in. 700 lbs. T. EH CI LE CFBO	4	Each	50.6997	202.80
Walworth DD Brass Stem OS&Y 6 in. 700 lbs. T. EH CI CFBO	1	Each	50.9057	50.91
6 in. 700 lbs. T. EH CI LE CFBO	1	Each	50.9057	50.91
NEEDLE VALVES Screwed				
Lunkenheimer 1/4 in. Brass Std.	2	Each	.6293	1.26
PLUG VALVES Flanged				
Nordstrom 6 in. 250 lbs. WP EH CI LE CFBO	2	Each	93.4849	186.97
PIPE Plain End (Random Lengths)	1	Lot		73.39

## TRANSMISSION SYSTEM MEASURING STATION EQUIPMENT

"O" System

6032

1

ITEM	QUANTITY	UNIT	UNIT COST	AMOUNT
SECOND AVENUE, DALLAS, DALLAS COUNTY, TEXAS, LINE O-4				
REGULATORS				
Emco 8 in. HP Balanced Valve with 8 in. Diaphragm Case, 6 Bolts Flanged	2	Each	379.5000	\$ 759.00
Emco 8 in. HP Balanced Valve with 11 in. Diaphragm Case, Serial No. 3296 and 3909, 6 Bolts Flanged	2	Each	379.5000	759.00
Emco 1 in. Type B L.P. Service Screwed	1	Each	4.8600	4.86
Hercules 1/2 or 1 in. HP Screwed	1	Each	8.3400	8.34
GAUGES				
Indicating Pressure				
Foxboro Brass Rim CI Case				
5 in. Dial	1	Each	4.3114	4.31
Range 0-250 lbs.	1	Each	4.3114	4.31
Range 0-500 lbs.				
Foxboro Test Aluminum Case				
4-1/2 in. Dial,	1	Each	16.4144	16.41
Range 0-250 lbs.				
GATE VALVES Flanged				
Crane DD OS&Y				
8 in. 700 lbs. T. Brass Stem	3	Each	69.0212	207.06
8 in. 700 lbs. T. Brass Stem with EM CI LE CFBO	7	Each	76.8118	537.68
8 in. 1000 lbs. T. Steel Stem	1	Each	81.9338	81.93
GATE VALVES Screwed				
Lunkenheimer Brass RS				
1/2 in. 125 lbs. WP	2	Each	1.1573	2.31
1/2 in. 150 lbs. WP	3	Each	1.1573	3.47
GLOBE VALVES Screwed				
Crane Brass				
3/8 in. 125 lbs. WP	3	Each	.4364	1.31
1/2 in. 125 lbs. WP	1	Each	.5689	.57
Lunkenheimer Brass				
1/4 in. 125 lbs. WP	1	Each	.6643	.66
NEEDLE VALVES Screwed				
Metric 1/4 in. Std.	2	Each	1.2588	2.52
PIPE Threaded and Coupled (Random Lengths)	1	Lot		104.32

2512

## TRANSMISSION SYSTEM MEASURING STATION EQUIPMENT

6033

"O" System

ITEM	QUANTITY	UNIT	UNIT COST	AMOUNT
<u>SECOND AVENUE, DALLAS, DALLAS COUNTY, TEXAS, LINE O-4 (Cont'd)</u>				
PIPE Plain End (Random Lengths)	1	Lot	-	\$ 172.81
HEADERS				
16 in. x 13 ft. with baseball welded ends and 3 - 12 in., 2 - 8 in. 1 - 1 in. and 1-1/4 in. welded openings	1	Each	96.4500	96.45
12 in. x 13 ft. with baseball welded ends and 5 - 8 in. welded openings	1	Each	70.5700	70.57
16 in. x 13 ft. with baseball welded ends and 4 - 12 in. welded openings	1	Each	93.2300	93.23
FITTINGS	1	Lot		338.43
WELDS	1	Lot		135.82
Material Cost				\$ 3,405.37
Installation				928.55
TOTAL COST INSTALLED				\$ 4,333.92
<u>LEE STREET, WEST GREENVILLE, HUNT COUNTY, TEXAS, LINE O-6</u>				
METERS				
Foxboro Type 207 Orifice Meter Range 100 in. Differential 250 lbs. Static with 24 Hour Clock Chart No. 858049, Serial No. A-8296, Company No. 1110	1	Each	143.1046	\$ 143.10
Foxboro Type 105 Differential Recorder Range 20 in. Differential Only 24 Hour Clock, Chart No. 858050, Serial No. A-8284 Company No. 1110-A	1	Each	119.9348	119.93
METER PIPING				
Wide Range Screwed Installation with Steel Needle Valves	1	Set	25.1700	25.17
REGULATORS				
Fulton 2 in. HP with 7-1/2 in. Diaphragm Case No Bolts Screwed	1	Each	54.9600	54.96

2513

Form 104-100M-1-53

## TRANSMISSION SYSTEM MEASURING STATION EQUIPMENT

6034

"Q" System

ITEM	QUANTITY	UNIT	UNIT COST	AMOUNT
LEE STREET, WEST GREENVILLE, HUNT COUNTY, TEXAS, LINE 0-6 (Cont'd)				
REGULATORS (Cont'd)				
Fulton 3 in. HP Balanced Valve with 7-1/2 in. Diaphragm Case 4 Bolts with EH CI LE CFBO	1	Each	94.8420	\$ 94.84
GAUGES				
Indicating Pressure Foxboro Brass Rim CI Case, 5 in. Dial Range 0-250 lbs.	1	Each	4.3114	4.31
Recording Pressure Foxboro CI Case and Rim 10 in. Chart No. 79877, Serial No. 128842 7 day clock Range 0-500 lbs.	1	Each	46.5752	46.58
GATE VALVES Flanged				
Crane DD Brass Stem OS&Y 6 in. 700 lbs. T.	2	Each	45.5755	91.15
6 in. 700 lbs. T. EH CI LE CFBO	4	Each	50.6997	202.80
GLOBE VALVES Screwed				
Jenkins Brass 1/4 in. 150 lbs. WP	1	Each	.7583	.76
NEEDLE VALVES Screwed				
Lunkenheimer Brass 1/4 in. 200 lbs. WP	1	Each	.6643	.66
PLUG VALVES Flanged				
Nordstrom 6 in. 250 lbs. WP EH CI LE CFBO	1	Each	93.4849	93.48
PIPE Threaded and Coupled (Random Lengths)				
	1	Lot		50.23
PIPE Plain End (Random Lengths)				
	1	Lot		46.07
HEADERS				
8 in. x 5 ft. 11 in. with orange peel welded ends and 5 - 6 in. welded openings	1	Each	45.9300	45.93
8 in. x 5 ft. 11 in. with orange peel welded ends and 4 - 6 in. welded openings (50% Ownership)	1	Each	41.4200	20.71

2514

## TRANSMISSION SYSTEM MEASURING STATION EQUIPMENT

"O" System

6035-6061

ITEM	QUANTITY	UNIT	UNIT COST	AMOUNT
<u>LEE STREET, WEST GREENVILLE, HUNT COUNTY, TEXAS, LINE O-6 (Cont'd)</u>				
FITTINGS	1	Lot		\$ 101.67
WELDS	1	Lot		31.95
Material Cost				\$ 1,174.30
Installation				324.42
TOTAL COST INSTALLED				\$ 1,498.72
<u>MANSFIELD, TARRANT COUNTY, TEXAS LINE O-7 MEASURING STATION</u>				
METERS				
Emco No. 4 500 lbs. T. Serial No. 5068 with Wylie Combined PV&T Recording Gauge, Serial No. 2085 0-76 lbs. Static, 7 day Foxboro Clock	1	Each	471.9596	\$ 471.96
REGULATORS				
Emco 2 in. Balanced Valve HP with 11 in. Diaphragm Case, Serial No. 1193, 6 bolts with EH CI CFBO	1	Each	89.6518	89.65
GAUGES				
Indicating Pressure Foxboro CI Case Brass Rim 5 in. Dial Range 0-250 lbs.	1	Each	4.3114	4.31
GATE VALVES Flanged				
Crane DD Brass Stem OS&Y 2 in. 700 lbs. T. with EH CI CFBO	1	Each	17.2449	17.24
4 in. 1000 lbs. T.	1	Each	32.2173	32.22
4 in. 1000 lbs. T. EH CI LE CFBO	6	Each	35.7335	214.40
4 in. 1000 lbs. T. EH CI LE CFBO (50% Ownership)	1	Each	35.7335	17.87
GLOBE VALVES Screwed				
Walworth Kay Brass RS 1/4 in. 125 lbs. WP	1	Each	40.67	41

2315

Form 284 100M 7-63

## TRANSMISSION SYSTEM MEASURING STATION EQUIPMENT

6062

\*O\* System

ITEM	QUANTITY	UNIT	UNIT COST	AMOUNT
<u>CUMBY, HOPKINS COUNTY, TEXAS</u> <u>LINE O-19 (Cont'd)</u>				
NEEDLE VALVES Screwed				
Crane 1/4 in. 125 lbs. WP Brass	1	Each	.4838	.24
(50% Ownership)				
Walworth 1/4 in. 125 lbs. WP Brass	2	Each	.4838	.97
PIPE Threaded and Coupled				
(Random Lengths)	1	Lot		1.10
PIPE Plain End (Random Lengths)	1	Lot		10.36
FITTINGS	1	Lot		19.99
WELDS	.1	Lot		22.05
Material Cost				\$ 755.01
Installation				208.16
TOTAL COST INSTALLED				\$ 963.17
<u>SULPHUR SPRINGS, HOPKINS COUNTY,</u> <u>TEXAS, LINE O-20</u>				
METERS				
Foxboro Type 207 Orifice Range				
100 in. Differential 250 lbs.				
Static with 24 Hour Clock,				
Chart No. 858049 Serial No.				
A-8291, Company No. 1178	1	Each	143.1046	\$ 143.10
Foxboro Type 105 Differential				
Recorder Range 20 in. Differ-				
ential Only with 24 Hour Clock				
Chart No. 858050, Serial No.				
A-69569, Company No. 1178-A	1	Each	119.9348	119.93
REGULATORS				
Emco 2 in. HP Balanced Valve				
with 9-1/2 in. diaphragm Case				
Serial No. 1340 with EH CI				
4 Bolts CFBO	1	Each	89.6518	89.65
Fulton 1-1/4 in. HP Balanced				
Valve with 5-1/2 in. Diaphragm				
Case 4 Bolts Screwed	1	Each	22.1000	22.10



## TRANSMISSION SYSTEM MEASURING STATION EQUIPMENT

"0" System

6063-6074

ITEM	QUANTITY	UNIT	UNIT COST	AMOUNT
<u>SULPHUR SPRINGS, HOPKINS COUNTY,</u> <u>TEXAS, LINE 0-20 (Cont'd)</u>				
METER PIPING				
Wide Range Screwed Installation with Steel Needle Valves	1	Set	25.1700	25.17
GAUGES				
Indicating Pressure				
Foxboro Brass Rim CI Case				
5 in. Dial	1	Each	4.3114	4.31
Range 0-250 lbs.				
Recording Pressure				
Foxboro 10 in. CI Case and Rim				
Chart No. 79877, Serial No.				
A-23656 with 7 day Foxboro	1	Each	46.5752	46.58
Clock, 0-500 lbs.				
GATE VALVES Flanged				
Crane DD Brass Stem OS&Y				
4 in. 700 lbs. T.	2	Each	28.8205	57.64
4 in. 700 lbs. T. with EH CI				
LE CFBO	3	Each	32.3367	97.01
6 in. 700 lbs. T. EH CI LE CFBO	4	Each	50.6997	202.80
GLOBE VALVES Screwed				
Crane 1/4 in. 125 lbs. WP Brass	1	Each	.4067	.41
Scott 1/4 in. Brass Std.	2	Each	.5865	1.17
PLUG VALVES Flanged				
Nordstrom				
4 in. 250 lbs. WP EH CI CFBO	2	Each	45.8848	91.77
SAFETY VALVES Screwed				
Crane 4 in. 125 lbs. WP L&W Type	1	Each	15.7096	15.71
PIPE Threaded and Coupled				
(Random Lengths)	1	Lot		31.99
PIPE Plain End (Random Lengths)	1	Lot		89.12
FITTINGS	1	Lot		83.66
WELDS	1	Lot		69.32
Material Cost				\$ 1,191.44
Installation				318.68
TOTAL COST INSTALLED				<u>\$ 1,510.12</u>

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2517

## TRANSMISSION SYSTEM MEASURING STATION EQUIPMENT

\*O\* System

6075

ITEM	QUANTITY	UNIT	UNIT COST	AMOUNT
WYLIE TAP, COLLIN COUNTY, TEXAS LINE 0-28 (Cont'd)				
FITTINGS	1	Lot		\$ 37.00
WELDS	1	Lot		49.75
Material Cost				\$ 1,272.02
Installation				347.12
TOTAL COST INSTALLED				\$ 1,619.14
ATHENS, HENDERSON COUNTY, TEXAS LINE 0-29				
METERS				
Foxboro Type 207 Orifice Meter Range 100 in. Differential, 100 lbs. Static with 24 Hour Clock, Chart No. 898039, Serial No. A-69829, Company No. 1279	1	Each	139.0256	\$ 139.03
Foxboro Type 105 Differential Recorder Range 20 in. Differ- ential only with 24 hour Clock Chart No. 858050, Serial No. 69580, Company No. 1279-A	1	Each	119.9348	119.93
METER PIPING				
Wide Range Screwed Installation with Steel Needle Valves	1	Set	25.1700	25.17
REGULATORS				
Emco 4 in. HP Balanced Valve with 9-1/2 in. Diaphragm Case Serial No. 7588, 6 Bolts with EH CI LE CFBO	1	Each	158.7412	158.74
Fulton 2 in. HP with 7-1/2 in. Diaphragm Case, No Bolts Screwed	1	Each	54.9600	54.96
GAUGES				
Indicating Pressure Crosby Brass Rim CI Case 5 in. Dial Range 0-250 lbs.	1	Each	3.7586	3.76
Recording Pressure Foxboro 10 in. CI Case and Rim, Serial No. A-79676, Chart No. 79977 with 7 day Foxboro Clock-Range 0-500 lbs.	1	Each	46.5752	46.58

2518

Form 35-105M-7-52

## TRANSMISSION SYSTEM MEASURING STATION EQUIPMENT

•O• System

6076-6086

ITEM	QUANTITY	UNIT	UNIT COST	AMOUNT
<u>ATHENS, HENDERSON COUNTY, TEXAS</u>				
<u>LINE 0-29 (Cont'd)</u>				
GATE VALVES Flanged				
Walworth DD Brass Stem OS&Y				
4 in. 700 lbs. T. with EH CI	1	Each	32.2646	32.26
CFBO	6	Each	50.9057	305.43
6 in. 700 lbs. T. EH CI LE CFBO	2	Each	45.7815	91.56
6 in. 700 lbs. T.				
GLOBE VALVES Screwed				
Crane 1/4 in. 300 lbs. WP Brass	2	Each	.4067	.81
Metric 1/4 in. Std.	1	Each	1.2588	1.26
PLUG VALVES Flanged				
Nordstrom Venturi Type				
6 in. 250 lbs. WP EH CI LE CFBO	2	Each	62.9837	125.97
SAFETY VALVES Screwed				
Crane 4 in. 125 lbs. WP L&W Type	1	Each	15.7096	15.71
PIPE Threaded and Coupled				
(Random Lengths)	1	Lot		42.27
PIPE Plain End (Random Lengths)	1	Lot		6.99
CUSHIONS				
18 in. x 6 ft. 6 in. with base-				
ball welded ends with 4 - 6				
in. welded openings and 1- 1/4	1	Each	70.5600	70.56
in. collar welded				
18 in. x 6 ft. 6 in. with base-				
ball welded ends and 4 - 6 in.	1	Each	70.2700	70.27
welded openings				
FITTINGS	1	Lot		113.44
WELDS	1	Lot		34.52
Material Cost				\$ 1,459.22
Installation				404.62
TOTAL COST INSTALLED				\$ 1,863.84

2519

## TRANSMISSION SYSTEM MEASURING STATION EQUIPMENT

"O" System

6087-6088

ITEM	QUANTITY	UNIT	UNIT COST	AMOUNT
STATION 96 PLUS 17 LINE O-29-11				
REGULATORS				
Emco 1-1/4 in. Type B Service Screwed	1	Each	4.8600	4.86
Hercules 1 in. HP Service Screwed	2	Each	8.3400	16.68
PIPE Threaded and Coupled (Random Lengths)	1	Lot		1.15
FITTINGS	1	Lot		12.06
WELDS	1	Lot		.79
Material Cost				35.54
Installation				9.87
TOTAL COST INSTALLED				45.41
GORDON, PALO PINTO COUNTY, TEXAS LINE O-30				
METERS				
Emco No. 3, 100 lbs. T. Serial No. D-1233 with Emco Combined PV&T Recording Gauge, Serial No. 140642, 0-100 lbs. Static with Emco 7 Day Clock	1	Each	239.7850	239.79
REGULATORS				
Fulton 1 in. HP with 5-5/8 in. Diaphragm Case 4 Bolts Screwed	1	Each	18.0550	18.06
Fulton 1-1/2 in. HP with 7-1/8 in. Diaphragm Case, 4 bolts Screwed	1	Each	22.1000	22.10
GAUGES				
Indicating Pressure Crosby Brass Rim CI Case 5 in. Dial Range 0-500 lbs.	1	Each	3.7586	3.76
PLUG VALVES Flanged				
Barco				
2 in. 250 lbs. WP	2	Each	12.3409	24.68
2 in. 250 lbs. WP EH CI CFBO	9	Each	14.2677	128.41
2 in. 250 lbs. WP EH CI CFBO (50% Ownership)	1	Each	14.2677	7.14

2519

2520

Form 254-100M-7-82

## TRANSMISSION SYSTEM MEASURING STATION EQUIPMENT

\*O\* System

6089

ITEM	QUANTITY	UNIT	UNIT COST	AMOUNT
STRAWN, PALO PINTO COUNTY, TEXAS LINE O-A-1 (Cont'd)				
GATE VALVES Flanged				
Walworth DD Brass Stem OS&Y				
2 in. 700 lbs. T. with EH CI	1	Each	17.2655	17.27
CFBO	2	Each	28.7484	57.50
4 in. 700 lbs. T.				
4 in. 700 lbs. T. with EH CI	8	Each	32.2646	258.12
CFBO	1	Each	32.2646	16.13
4 in. 700 lbs. T. with EH CI				
CFBO (50% Ownership)				
GATE VALVES Screwed				
Walworth NRS Brass				
1/4 in. 250 lbs. WP	1	Each	2.0566	2.06
SAFETY VALVES Screwed				
Crane No. 12687 L&W Type				
2 in. 125 lbs. WP	1	Each	5.6714	5.67
PIPE Threaded and Coupled (Random Lengths)	1	Lot		4.47
PIPE Plain End (Random Lengths)	1	Lot		7.13
CUSHIONS				
20 x 36 in. with baseball welded ends with 3 - 4 in. welded openings and 2 - 1/4 in. collars welded	1	Each	63.2400	63.24
FITTINGS	1	Lot		55.07
WELDS	1	Lot		32.27
Material Cost				\$ 1,075.47
Installation				296.27
TOTAL COST INSTALLED				\$ 1,371.74
THERMO FIRE BRICK COMPANY, NEAR CRUSH, HOPKINS COUNTY, TEXAS LINE O				
METERS				
Emco No. 4, 50 lbs. T. Serial No. B-5639 with Emco Combined PV&T Recording Gauge, Serial				

2521

## TRANSMISSION SYSTEM MEASURING STATION EQUIPMENT

10" System

6090

ITEM	QUANTITY	UNIT	UNIT COST	AMOUNT
THERMO FIRE BRICK COMPANY, NEAR CRUSH, HOPKINS COUNTY, TEXAS LINE 0				
METERS				
Emco No. 4 (Cont'd)				
No. 128086, 0-100 lbs. Static with 7 day Emco Clock	1	Each	267.1664	267.17
Foxboro Type 207 Orifice Meter Range 100 in. Differential 100 lbs. Static with 24 Hour Clock, Chart No. 898039, Serial No. A-79368, Company No. 1283	1	Each	139.0256	139.03
METER PIPING				
Single Welded Installation for Flange Connection Meter	1	Set	23.1700	23.17
REGULATORS				
Fulton 1-1/2 in. HP with 5 in. Diaphragm Case 4 Bolts Screwed	1	Each	26.2700	26.27
Fulton 2 in. HP with 7-1/2 in. Diaphragm Case No Bolts Screwed	1	Each	54.9600	54.96
Emco 2 in. HP Balanced Valve, Serial No. 6072 with 11 in. Diaphragm Case 6 Bolts with EH CI LE 4 Bolts CFBO	1	Each	89.6518	89.65
Emco 2 in. HP Balanced Valve Serial No. 7311 with 12-1/2 in. Diaphragm Case 6 Bolts with EH CI LE 4 Bolts CFBO	1	Each	89.6518	89.65
GAUGES				
Indicating Pressure				
Crosby Brass Rim CI Case				
5 in. Dial	1	Each	3.7586	3.75
Range 0 - 60 lbs.	1	Each	3.7586	3.76
Range 0 - 250 lbs.	1	Each	3.7586	3.76
Range 0 - 500 lbs.				
GATE VALVES Flanged				
Walworth DD Brass Stem OS&Y				
4 in. 700 lbs. T.	1	Each	28.7484	28.75
4 in. 700 lbs. T. EH CI CFBO	2	Each	32.2646	64.53
4 in. 700 lbs. T. EH CI LE CFBO	3	Each	32.2646	96.79



2522

Form 254 100M 7-57

## TRANSMISSION SYSTEM MEASURING STATION EQUIPMENT

"O" System

6091-6102

ITEM	QUANTITY	UNIT	UNIT COST	AMOUNT
THERMO FIRE BRICK COMPANY, NEAR CRUSH, HOPKINS COUNTY, TEXAS LINE O.				
GLOBE VALVES Screwed Crane 1/4 in. 300 lbs. WP Brass	2	Each	.9266	1.85
NEEDLE VALVES Screwed Lunkensheimer 1/4 in. 200 lbs. WP Brass	1	Each	.6293	.63
PLUG VALVES Flanged Barco 2 in. 250 lbs. WP with EH CI 4 Bolts CFBO	9	Each	14.2677	128.41
Nordstrom 2 in. 250 lbs. WP with EH CI 4 Bolts CFBO	1	Each	15.4336	15.43
4 in. 250 lbs. WP with EH CI CFBO	1	Each	45.8848	45.88
4 in. 250 lbs. WP EH CI LE CFBO	1	Each	45.8848	45.88
SAFETY VALVES Screwed Crane 2 in. 125 lbs. WP L&W Type	1	Each	5.6714	5.67
PIPE Threaded and Coupled (Random Lengths)	1	Lot		13.91
PIPE Plain End (Random Lengths)	1	Lot		5.61
CUSHIONS 12 x 72 in. with Baseball Welded ends with 4 - 4 in. welded openings and 1-1/4 in. collar welded	1	Each	44.2200	44.22
12 x 72 in. with baseball welded ends with 3 - 4 in. and 2 - 2 in. Welded Openings	1	Each	43.7700	43.77
12 x 47 in. with Orange Peel Welded ends with 2 - 2 in. and 1 - 1/4 in. Collar Welded	1	Each	32.4900	32.49
FITTINGS	1	Lot		59.04
WELDS	1	Lot		48.73
Material Cost				\$ 1,382.77
Installation				378.87
TOTAL COST INSTALLED				\$ 1,761.64

2523

## TRANSMISSION SYSTEM MEASURING STATION EQUIPMENT

"R" System

6103

ITEM	QUANTITY	UNIT	UNIT COST	AMOUNT
<b>WINTERS, RUNNELS COUNTY, TEXAS</b>				
<b>LINE R-1 (Cont'd)</b>				
<b>SAFETY VALVES</b> Screwed Crane 4 in. 125 lb. WP No. 12635 BL&WT Type	1	Each	15.7096	\$ 15.71
<b>PIPE</b> (Random Lengths)	1	Lot		45.90
<b>FITTINGS</b>	1	Lot		57.43
<b>WELDS</b>	1	Lot		61.75
Material Cost				\$ 796.42
Installation				208.65
<b>TOTAL COST INSTALLED</b>				<b>\$ 1,005.07</b>
<b>BALLINGER, RUNNELS COUNTY, TEXAS</b>				
<b>LINE R-2</b>				
<b>METERS</b>				
Westcott Orifice Meter with Bristol Case 100 in. Differ- ential Static Serial No. 14975 Company No. 1187 with 24 hour clock	1	Each	130.3262	\$ 130.33
Westcott Differential Recorder Bristol Case 20 in. Differ- ential only Serial No. 14982 Company No. 1187-A	1	Each	113.7437	113.74
<b>METER PIPING</b>				
Wide range screwed installation with steel needle valves	1	Set	25.1700	25.17
<b>REGULATORS</b>				
Fulton 2 in. HP with 7 in. diaphragm case screwed	2	Each	54.9600	109.92
<b>GAUGES</b>				
Indicating Pressure Foxboro Brass Rim Iron Flange Back with 6 in. dial Range 0-500 lbs.	1	Each	4.3114	4.31

2524

Form 224-100M-1-53

Form 224-100M-1-53

## TRANSMISSION SYSTEM MEASURING STATION EQUIPMENT

"R" System

6104-6106

ITEM	QUANTITY	UNIT	UNIT COST	AMOUNT
<u>BALLINGER, RUNNELS COUNTY, TEXAS</u> <u>LINE R-2 (Cont'd)</u>				
<u>GAUGES (Cont'd)</u>				
Recording Pressure				
Foxboro 10 in. iron rim				
flange back serial no.				
128844 chart no. 79877				
with 7 day clock				
Range 0-500 lbs.	1	Each	46.5752	\$ 46.58
<u>GATE VALVES Flanged</u>				
Walworth DD OS&Y CFBO				
4 in. 125 lb. WP	5	Each	19.1291	95.65
2 in. 700 lb. T	4	Each	17.2655	69.06
<u>GLOBE VALVES Screwed</u>				
Walworth 1/4 in. 125 lb. WP				
Brass	2	Each	.4067	.81
<u>PLUG VALVES Flanged</u>				
Nordstrom 2 in. 250 lb. WP CFBO	2	Each	15.4336	30.87
<u>SAFETY VALVES Screwed</u>				
Crane 4 in. 125 lb. WP No.				
12635	1	Each	15.7096	15.71
<u>PIPE (Random Lengths)</u>	1	Lot		54.27
<u>FITTINGS</u>	1	Lot		44.00
<u>WELDS</u>	1	Lot		59.26
Material Cost				\$ 799.68
Installation				210.28
<b>TOTAL COST INSTALLED</b>				<b>\$ 1,009.96</b>
<u>TALPA, CULMAN COUNTY, TEXAS,</u> <u>LINE R-3</u>				
<u>METERS</u>				
Emco No. 2-1/2 500 lb. T Serial				
No. 2549 with Foxboro com-				
bined PVAT Recording Gauge,				
Serial No. F-330 0-80 lbs.				
static with 7 day Foxboro clock	1	Each	209.5530	\$ 209.55

2525

## TRANSMISSION SYSTEM MEASURING STATION EQUIPMENT

"R" System

6107-6108

ITEM	QUANTITY	UNIT	UNIT COST	AMOUNT
<u>COLEMAN OIL &amp; GAS COMPANY,</u> <u>COLEMAN COUNTY, TEXAS, LINE R</u>				
<b>METERS</b>				
Foxboro Type C Orifice Range 100 in. Differential 500 lbs. static with 24 hour clock Chart No. 85828 Serial No. 59825 Company No. 1256	1	Each	141.2682	\$ 141.27
Foxboro Type T Differential Recorder Range 20 in. Differ- ential only with 24 hour clock Chart No. 89863 Serial No. A-11792 Company No. 1256-A	1	Each	106.1254	106.13
<b>METER PIPING</b>				
Wide range screwed installation with steel needle valves	1	Set	25.1700	25.17
<b>FITTINGS</b>				
	1	Lot		16.52
Material Cost				\$ 289.09
Installation				82.10
<b>TOTAL COST INSTALLED</b>				<b>\$ 371.19</b>
<u>VACUUM OIL COMPANY, RUNNELS</u> <u>COUNTY, TEXAS, LINE R-1</u>				
<b>METERS</b>				
Emco No. 4 500 lb. T Serial No. 5334 with Wylie combined PV&T Recording Gauge, Serial No. 2729 0-350 lbs. static with 7 day Foxboro clock	1	Each	471.9596	\$ 471.96
<b>GATE VALVES Flanged</b>				
Walworth DD OS&Y 2 in. 700 lb. T CFBO	1	Each	17.2655	17.27
<b>GATE VALVES Screwed</b>				
Walworth 2 in. 700 lb. T OS&Y	4	Each	14.9086	59.63
1 in. 250 lb. WP Brass Wedge NRS	1	Each	4.1561	4.16

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## Defendant's Exhibit No. 28—Continued

[fols. 6109-6112]

## Lone Star Gas Company

## Transmission System Measuring Station Equipment

## Recapitulation "Numbered" System

Line	Location	Reproduction Cost—New
<b>City Gate Stations</b>		
16	Albany.....	\$1,341.41
17-1	Cisco.....	362.66
17-1	Cisco-Regulator Box.....	148.29
18	Abilene.....	1,672.69
18-1	Baird	
	Meter House.....	958.52
	Gravitometer House.....	449.09
18-2	Clyde.....	1,016.53
18-3	Moran.....	1,404.63
18-4	Putnam.....	1,084.44
33	Eastland.....	1,077.13
140	North Abilene.....	1,537.96
174	Eastland County, Station 5 plus 87.....	251.16
Total City Gate Stations.....		<u>\$11,304.51</u>
<b>Main Line Sales Stations</b>		
16	Station 241 plus 28, Sedwick Oil Company.....	\$330.73
16	Station 277 plus 32, Putnam Oil Company.....	159.40
17	Station 23 plus 85, Texas Company.....	155.12
18	Station 555 plus 22, Cisco Oil Company.....	701.94
140	No. Abilene Brick Co.	
	Meter House.....	1,545.17
	Regulator House.....	674.80
153	Station 47 plus 92, Hickory Oil & Gas Co.....	369.64
174	Station 8 plus 26, Chestnut & Smith Corp., Plant No. 109.....	256.23
Total Main Line Sales Stations.....		<u>\$4,193.03</u>
<b>Main Line Check Meter Stations</b>		
16	Station 0 plus 17.7, Moran Compressing Station.....	\$30.34
16	Station 665 plus 05, Near Albany, Shackelford Co.....	140.46

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**PAGE**



2529

## TRANSMISSION SYSTEM MEASURING STATION EQUIPMENT

6113

## Numbered System

ITEM	QUANTITY	UNIT	UNIT COST	AMOUNT
<u>CISCO, EASTLAND COUNTY, TEXAS,</u> <u>LINE 17-1 (Cont'd)</u>				
PIPE Threaded and Coupled (Random Lengths)	1	Lot		\$ .37
FITTINGS	1	Lot		18.83
Material Cost				\$ 282.44
Installation				80.22
TOTAL CCST INSTALLED				\$ 362.66
<u>CISCO, EASTLAND COUNTY, TEXAS,</u> <u>LINE 17-1</u>				
REGULATORS				
Fulton 2 in. HT Balanced Valve with 7-1/2 in. diaphragm case screwed	1	Each	54.9600	\$ 54.96
GATE VALVES Flanged				
Westcott 4 in. 500 lb. WP MRS	1	Each	25.7738	25.77
GATE VALVES Screwed				
Ludlow 2 in. 250 lb. S WP MD MRS	1	Each	14.0232	14.02
FITTINGS	1	Lot		20.74
Material Cost				\$ 115.49
Installation				32.80
TOTAL COST INSTALLED				\$ 148.29
<u>ABILENE, TAYLOR COUNTY, TEXAS,</u> <u>LINE 18</u>				
METERS				
Westcott Orifice Bristol Case 100 in. differential with 24 hour clock. Serial No. 11835 Company No. 1176	1	Each	130.3262	\$ 130.33

2530

Form 854 100M 7-53

## TRANSMISSION SYSTEM MEASURING STATION EQUIPMENT

6114

## Numbered System

a k	ITEM	QUANTITY	UNIT	UNIT COST	AMOUNT
	ABILENE, TAYLOR COUNTY, TEXAS, LINE 18 (Cont'd)				
	METERS (Cont'd)				
	Westcott Differential Recorder Bristol Case 20 in. differ- ential only with 24 hour clock Serial No. 15662 Company No. 1176-A	1	Each	113.7437	113.74
	METER PIPING				
	Wide range screwed installation with steel needle valves	1	Set	25.1700	25.17
	REGULATORS				
	Fulton 4 in. HP with 7-1/2 in. diaphragm case 4 bolts with 4 x 10 in. EH CI 8 bolts CFBO	1	Each	122.5890	122.59
	GAUGES				
	Indicating Pressure				
	Foxboro Model A Brass Flare Rim Iron Case Flange Back with 5 in. dial Range 0-300 lbs.	1	Each	4.3114	4.31
	Foxboro Brass Flare Rim Iron Case Flange Back with 5 in. dial Range 0-500 lbs.	1	Each	4.3114	4.31
	GATE VALVES Flanged				
	Darling 6 in. 1000 lb. T No. 102 brass stem NRS. with 6 x 12-1/2 in. EH CI 12 bolts CFBO	2	Each	51.1676	102.34
	Walworth DD Brass Stem OS&Y 8 in. 700 lb. T with 8 x 15 in. EH CI 12 bolts CFBO	4	Each	77.0178	308.07
	4 in. 700 lb. T with 4 x 10 in. EH CI 8 bolts CFBO	1	Each	32.2646	32.26
	GATE VALVES Screwed				
	Lunkenheimer 1/4 in. brass RS 150 lb. WP	2	Each	1.0941	2.19
	GLOBE VALVES Screwed				
	Lunkenheimer 1/2 in. 200 lb. WP brass	1	Each	1.0909	1.09
	Lunkenheimer Renewo 1/2 in. 200 lb. WP brass RS	1	Each	1.0909	1.09

2531

Form 254 100M 7-53

## TRANSMISSION SYSTEM MEASURING STATION EQUIPMENT

Numbered System

6115-6123

ITEM	QUANTITY	UNIT	UNIT COST	AMOUNT
<u>ABILENE, TAYLOR COUNTY, TEXAS,</u> <u>LINE 18 (Cont'd)</u>				
NEEDLE VALVES Screwed Metric 1/4 in. steel	1	Each	1.2588	1.26
PLUG VALVES Flanged Nordstrom 6 in. 250 lb. WP with 6 x 12-1/2 in. EH CI 12 bolts CFBO	1	Each	93.4849	93.48
SAFETY VALVES Screwed Crane 4 in. 125 lb. WP L&W Type	1	Each	15.7096	15.71
PIPE Threaded and Coupled (Random Lengths)	1	Lot		57.38
PIPE Plain End (Random Lengths)	1	Lot		6.17
HEADERS				
12 in. x 12 ft. baseball welded end with 2 4 in. openings and 1 1/2 in. opening	1	Each	46.3500	46.35
18 in. x 6 ft. baseball welded end with 1 1/4 in. opening and 2 6 in. and 2 8 in. openings	1	Each	72.3100	72.31
FITTINGS	1	Lot		122.68
WELDS	1	Lot		51.22
Material Cost				\$ 1,314.05
Installation				358.64
TOTAL COST INSTALLED				\$ 1,672.69
<u>BAIRD, CALLAHAN COUNTY, TEXAS,</u> <u>LINE 18-1</u>				
METERS				
Foxboro Type C Orifice range 100 in. differential 100 lbs. static with 24 hour clock Chart No. 89870 Serial No. 48052 Company No. 1171	1	Each	129.6258	129.63

2532

Form 284 100M 7-22

## TRANSMISSION SYSTEM MEASURING STATION EQUIPMENT

Numbered System

6124

G K	ITEM	QUANTITY	UNIT	UNIT COST	AMOUNT
	<u>EASTLAND, EASTLAND COUNTY, TEXAS, LINE 33 (Cont'd)</u>				
	SAFETY VALVES Screwed Crane 2 in. 125 lb. WP No. 12687 L&W Type	1	Each	5.6714	\$ 5.67
	PIPE Threaded and Coupled (Random Lengths)	1	Lot		13.13
	PIPE Plain End (Random Lengths)	1	Lot		2.88
	HEADERS				
	12 x 66 in. with baseball welded ends and 1 1/4 in. opening; 1 1 in. opening and 4 2 in. openings	1	Each	38.0600	38.06
	12 x 66 in. with baseball welded ends and 1 1 in. opening; 2 2 in. openings and 2 4 in. openings	1	Each	40.9300	40.93
	FITTINGS	1	Lot		64.75
	WELDS	1	Lot		17.36
	Material Cost				\$ 842.73
	Installation				234.40
	TOTAL COST INSTALLED				\$ 1,077.13
	<u>NORTH ABILENE, TAYLOR COUNTY, TEXAS, LINE 140</u>				
	METERS				
	Westcott Orifice Bristol Case 100 in. differential with 24 hour clock Serial No. 11119 Company No. 1222	1	Each	130.3262	\$ 130.33
	Foxboro Type T Differential Re- corder range 20 in. differ- ential only with 24 hour clock Chart No. 89863 Serial No. 16858 Company No. 1222-A	1	Each	106.1254	106.13

2533

## TRANSMISSION SYSTEM MEASURING STATION EQUIPMENT

Numbered System

6125

d	ITEM	QUANTITY	UNIT	UNIT COST	AMOUNT
	NORTH ABILENE, TAYLOR COUNTY, TEXAS, LINE 140 (Cont'd)				
	METER PIPING				
	Wide range screwed installation with steel needle valves	1	Set	25.1700	25.17
	REGULATORS				
	Emco 4 in. HP Balanced Valve No. 3042 with 10 in. diaphragm case 6 bolts with 4 x 10 in. EH CI 8 bolts CFBO	1	Each	158.7412	158.74
	Emco 4 in. HP Balanced Valve No. 5772 with 6 in. diaphragm case 6 bolts with 4 x 10 in. EH CI 8 bolts CFBO	1	Each	158.7412	158.74
	GAUGES				
	Indicating Pressure				
	Foxboro Model A Brass Flare Rim Iron Case Flange Back with 5 in. dial Range 0-300 lbs.	1	Each	4.3114	4.31
	Recording Pressure				
	Foxboro 10 in. Single Type Serial No. 48869 Chart No. 79977 with 7 day clock Range 0-500 lbs.	1	Each	46.5752	46.58
	GATE VALVES Flanged				
	Walworth ID Brass Stem OS&Y				
	4 in. 1000 lb. T	2	Each	32.2688	64.54
	4 in. 1000 lb. T with 4 x 10 in. EH CI 8 bolts CFBO	1	Each	35.7850	35.79
	4 in. 700 lb. T	2	Each	28.7484	57.50
	4 in. 700 lb. T with 4 x 10 in. EH CI 8 bolts CFBO	4	Each	32.4666	129.37
	GLOBE VALVES Screwed				
	Lunkenheimer 1/4 in. 150 lb. WP brass	2	Each	.6643	1.33
	PLUG VALVES Flanged				
	Nordstrom 4 in. 250 lb. WP with 4 x 10 in. EH CI 8 bolts CFBO	2	Each	45.8848	91.77
	SAFETY VALVES Screwed				
	Crane 4 in. 125 lb. WP No. 12635 L&W Type	1	Each	15.7096	15.71

2534

Form 254 10-54 7-53

## TRANSMISSION SYSTEM MEASURING STATION EQUIPMENT

6126

## Numbered System

d k	ITEM	QUANTITY	UNIT	UNIT COST	AMOUNT	d k
	<u>NORTH ABILENE, TAYLOR COUNTY, TEXAS</u> <u>LINE 140 (Cont'd)</u>					
	PIPE Threaded and Coupled (Random Lengths)	1	Lot		\$ 14.57	
	PIPE Plain End (Random Lengths)	1	Lot		8.43	
	HEADERS					
	12 in. x 6 ft. with baseball welded ends 1 1/4 in. opening and 4 4 in. openings	1	Each	44.1600	44.16	
	FITTINGS	1	Lot		67.21	
	WELDS	1	Lot		47.39	
	Material Cost				\$ 1,208.27	
	Installation				329.69	
	TOTAL COST INSTALLED				\$ 1,537.96	
	<u>STATION 5 PLUS 87, EASTLAND, EASTLAND COUNTY, TEXAS, LINE 174</u>					
	REGULATORS					
	Fulton 4 in. HP with 7-1/4 in. diaphragm case 4 bolts with 4 x 10 in. EH CI 8 bolts CFBO	1	Each	122.5890	\$ 122.59	
	GATE VALVES Flanged					
	Crane 4 in. 700 lb. T DD OS&Y with 4 x 10 in. EH CI 8 bolts CFBO	1	Each	32.3367	32.34	
	Walworth 4 in. 700 lb. T DD OS&Y with 4 x 10 in. EH CI 8 bolts CFBO	1	Each	32.2646	32.26	
	GLOBE VALVES Screwed					
	Lunkenheimer 1/4 in. 150 lb. WP brass RS	1	Each	.9841	.98	
	PIPE Threaded and Coupled (Random Lengths)	1	Lot		3.03	

2535

Form 864 100M 7-58

## TRANSMISSION SYSTEM MEASURING STATION EQUIPMENT

Numbered System

6127

d r	ITEM	QUANTITY	UNIT	UNIT COST	AMOUNT
	STATION 5 PLUS 87, EASTLAND, EASTLAND COUNTY, TEXAS, LINE 174 (Cont'd)				
	FITTINGS	1	Lot		\$ 4.41
	Material Cost				\$ 195.61
	Installation				55.55
	TOTAL COST INSTALLED				\$ 251.16
	STATION 241 PLUS 28, SEDWICK OIL COMPANY, SHACKELFORD COUNTY, TEXAS, LINE 16				
	METERS				
	Emco No. 2-1/2 500 lb. T Serial No. 2588 with Foxboro PV&T Recording Gauge Serial No. P-337 0-80 lbs. Static with 7 day Foxboro clock	1	Each	209.5530	\$ 209.55
	GATE VALVES Screwed				
	Lunkenheimer Clip 2 in. 100 lb. WP. RS	4	Each	3.5032	14.01
	Westcott 2 in. 800 lb. WP DD NRS	1	Each	19.4032	19.40
	PIPE Threaded and Coupled (Random Lengths)	1	Lot		.88
	FITTINGS	1	Lot		13.74
	Material Cost				\$ 257.58
	Installation				73.15
	TOTAL COST INSTALLED				\$ 330.73



2536

FORM 224 10-10-1-53

## TRANSMISSION SYSTEM MEASURING STATION EQUIPMENT

6128

Numbered System

d k	ITEM	QUANTITY	UNIT	UNIT COST	AMOUNT
	<u>STATION 277 PLUS 32, PUTNAM OIL COMPANY, SHACKELFORD COUNTY, TEXAS, LINE 16</u>				
	<b>METERS</b>				
	Emco No. 2 50 lb. T Serial No. 190204 with Foxboro PV&T Recording Gauge Serial No. F-399 0-50 lbs. static with Foxboro 7 day clock	1	Each	106.7748	\$ 106.77
	<b>REGULATORS</b>				
	Hercules 1 in. with 3-1/2 in. diaphragm case screwed	1	Each	8.3400	8.34
	<b>GATE VALVES Screwed</b>				
	Lunkenheimer 1/2 in. 150 lb. WP brass	1	Each	1.1573	1.16
	Lunkenheimer Clip 1 in. 100 lb. WP	1	Each	1.2273	1.22
	<b>PIPE Threaded and Coupled (Random Lengths)</b>	1	Lot		.21
	<b>FITTINGS</b>	1	Lot		6.41
	Material Cost				\$ 124.14
	Installation				35.28
	<b>TOTAL COST INSTALLED</b>				\$ 159.40
	<u>STATION 23 PLUS 85, TEXAS COMPANY, CALLAHAN COUNTY, TEXAS, LINE 17</u>				
	<b>METERS</b>				
	Emco No. 2 50 lb. T Serial No. 185095 with Foxboro PV&T Re- cording Gauge Serial No. F-312 0-80 lbs. static with Foxboro 7 day clock	1	Each	106.7748	\$ 106.77
	<b>GAUGES</b>				
	Indicating Pressure Ashcroft American with 6 in. dial Range 0-500 lbs.	1	Each	5.2744	5.27

2537

## TRANSMISSION SYSTEM MEASURING STATION EQUIPMENT

Numbered System

6129

ITEM	QUANTITY	UNIT	UNIT COST	AMOUNT
<b>STATION 23 PLUS 85, TEXAS COMPANY, CALLAHAN COUNTY, TEXAS, LINE 17, (Cont'd)</b>				
<b>GATE VALVES</b> Screwed Lunkenheimer 1 in. 150 lb. WP brass	3	Each	2.2433	\$ 6.73
<b>PIPE</b> Threaded and Coupled (Random Lengths)	1	Lot		.88
<b>FITTINGS</b>	1	Lot		1.16
Material Cost				\$ 120.81
Installation				34.31
<b>TOTAL COST INSTALLED</b>				<u>\$ 155.12</u>
<b>STATION 555 PLUS 22, CISCO OIL COMPANY, EASTLAND COUNTY, TEXAS, LINE 16</b>				
<b>METERS</b>				
Emco No. 4 500 lb. T Serial No. 5207 with Foxboro PV&T Recording Gauge Serial No. F-704 0-500 lbs. static with 7 day Foxboro clock	1	Each	406.7500	\$ 406.75
<b>GATE VALVES</b> Flanged Westcott 2 in. 800 lb. WP brass stem DD OS&Y with 2 x 6-1/2 in. EH CI 8 bolts CFBO	2	Each	30.2805	60.56
<b>GATE VALVES</b> Screwed Crane 1 in. 125 lb. WP brass RS	1	Each	1.1434	1.14
Westcott 2 in. 800 lb. WP brass stem DD NRS	3	Each	19.4032	58.21
<b>PIPE</b> Threaded and Coupled (Random Lengths)	1	Lot		1.50

2538

Form 254 100M 7-43

## TRANSMISSION SYSTEM MEASURING STATION EQUIPMENT

Numbered System

6130

d r	ITEM	QUANTITY	UNIT	UNIT COST	AMOUNT
	<u>STATION 555 PLUS 22, CISCO OIL COMPANY, EASTLAND COUNTY, TEXAS, LINE 18 (Cont'd)</u>				
	<b>FITTINGS</b>	1	Lot		\$ 18.52
	Material Cost				\$ 546.68
	Installation				155.26
	<b>TOTAL COST INSTALLED</b>				\$ 701.94
	<u>NORTH ABILENE BRICK COMPANY, ABILENE, TAYLOR COUNTY, TEXAS, LINE 140</u>				
	<b>METERS</b>				
	Emco No. 4 100 lb. T Serial No. 7471 Foxboro PV&T Recording Gauge Serial No. F-166 0-100 lbs. static with Foxboro 7 day clock	1	Each	292.2558	\$ 292.26
	Emco No. 4 100 lb. T Serial No. 7468 Foxboro PV&T Recording Gauge Serial No. F-165 0-100 lbs. static with Foxboro 7 day clock	1	Each	292.2558	292.26
	Emco No. 4 100 lb. T Serial No. 7466 Foxboro PV&T Recording Gauge Serial No. F-167 0-100 lbs. static with Foxboro 7 day clock	1	Each	292.2558	292.26
	<b>GATE VALVES Flanged</b>				
	Valworth 4 in. 125 lb. SWP 175 OWG MD OS&Y with 4 x 10 in. EH CI 8 bolts CFBO	11	Each	19.1291	210.42
	<b>PIPE Plain End (Random Lengths)</b>	1	Lot		4.59
	<b>HEADERS</b>				
	6 in. x 8 ft. 3 in. with orange peel welded ends with 5 4 in. openings	2	Each	32.0700	64.14

2539

## TRANSMISSION SYSTEM MEASURING STATION EQUIPMENT

6131

Numbered System

ITEM	QUANTITY	UNIT	UNIT COST	AMOUNT
<b>NORTH ABILENE BRICK COMPANY, ABILENE, TAYLOR COUNTY, TEXAS, LINE 140 (Cont'd)</b>				
<b>FITTINGS</b>	1	Lot		\$ 35.09
<b>WELDS</b>	1	Lot		15.90
Material Cost				\$ 1,206.92
Installation				338.25
<b>TOTAL COST INSTALLED</b>				<b>\$ 1,545.17</b>
<b>NORTH ABILENE BRICK COMPANY, ABILENE, TAYLOR COUNTY, TEXAS, LINE 140</b>				
<b>REGULATORS</b>				
Fulton Duplex 8 in. LP Sensitive Gas Governor Serial No. 1698 with 28 in. diaphragm case flanged	1	Each	374.1760	\$ 374.18
<b>GATE VALVES Flanged</b>				
Ludlow IIRN ID NRS No. 5 8 in. 350 lb. Water Test 85 lbs. SWP 175 lb. WWP with 8 x 13-1/2 in. CI Std. 8 bolts CF80	2	Each	39.2701	78.54
6 in. 350 lb. Water Test 85 lb. SWP 175 lb. WWP with 6 x 11 in. CI Std. 8 Bolts CF80	1	Each	26.2896	26.29
<b>GATE VALVES Screwed</b>				
Crane 2 in. 125 lb. WP brass RS	1	Each	3.0077	3.01
<b>FITTINGS</b>	1	Lot		43.53
Material Cost				\$ 525.55
Installation				149.25
<b>TOTAL COST INSTALLED</b>				<b>\$ 674.80</b>

2540

Form 554 100M 7-51

## TRANSMISSION SYSTEM MEASURING STATION EQUIPMENT

Numbered System

6132-6145

ITEM	QUANTITY	UNIT	UNIT COST	AMOUNT
<b>STATION 47 PLUS 92, HICKORY OIL AND GAS COMPANY, EASTLAND COUNTY, TEXAS, LINE 153</b>				
<b>METERS</b>				
Emco No. 3 100 lb. T Serial No. 3883 with Emco Combined PV&T Recording Gauge Serial No. 128139 0-100 lbs. static with Emco 7 day clock	1	Each	239.7850	\$ 239.79
<b>GATE VALVES Screwed</b>				
Lunkenheimer Brass	5	Each	6.7355	33.68
2 in. 150 lb. WP	2	Each	2.2433	4.49
1 in. 150 lb. WP				
<b>PIPE Threaded and Coupled (Random Lengths)</b>				
	1	Lot		.85
<b>FITTINGS</b>				
	1	Lot		9.07
Material Cost				\$ 287.88
Installation				81.76
<b>TOTAL COST INSTALLED</b>				<b>\$ 369.64</b>
<b>STATION 8 PLUS 26, CHESTNUT &amp; SMITH CORPORATION, PLANT NO. 109, EASTLAND COUNTY, TEXAS, LINE 174</b>				
<b>METERS</b>				
Foxboro Type C Orifice range 100 in. differential 500 lbs. static with 7 day jeweled clock Chart No. 85828 Serial No. 72816 Company No. 1160	1	Each	152.7382	\$ 152.74
<b>METER PIPING</b>				
Single screwed installation with Lunkenheimer brass needle valves	1	Set	14.8500	14.85
<b>FITTINGS</b>				
	1	Lot		31.97
Material Cost				\$ 199.56
Installation				56.67
<b>TOTAL COST INSTALLED</b>				<b>\$ 256.23</b>

## TRANSMISSION SYSTEM MEASURING STATION EQUIPMENT

T. P. U. System

6146

ITEM	QUANTITY	UNIT	UNIT COST	AMOUNT
<u>MAIN LINE SALES STATIONS</u>				
<u>TEXAS ELECTRIC SERVICE COMPANY</u>				
<u>METERS</u>				
Foxboro, Type 207 Orifice Meter Serial No. A-81676 Company No. 1339 Chart No. 898039 Range 0-100 in. differential 0-100 lbs. static 24 hour clock	1	Each	139.0256	139.03
Foxboro Type 105 differential recorder Serial No. A-24050 Company No. 1339-A Chart No. 858050 Range 0-20 in. differ- ential 24 hour clock	1	Each	119.9348	119.93
<u>METER PIPING</u>				
Wide range welded installation with steel needle valves	1	Set	30.5400	30.54
<u>RECORDING CALORIMETER</u>				
Thomas Serial No. A-651895-A Company No. C-5 Range 0-1500 BTU	1	Each	1972.6400	1,972.64
Pipe (Random Lengths) 1/4 in. EM. 430 lbs. per foot	13	Feet	.0310	.40
Globe Valves Screwed Lunkenheimer 1/4 in. 200 lbs. SWP Brass RS	3	Each	.9841	2.95
Fittings	1	Lot		.15
<u>RECORDING GRAVITOMETERS</u>				
Acme Serial No. 106 Company No. G-37 Range .5 to 1 Chart No. 710 - 7 day clock	1	Each	333.8910	333.89
Pipe (Random Lengths) T & C 1/4 in. EM. 430 lbs. per foot	37	Feet	.0310	1.15
Gate Valve Screwed Walworth 1/4 in. 125 lbs. SWP DD Brass RS	1	Each	.5848	.58
Globe Valve Screwed Lunkenheimer 1/4 in. 200 lbs. SWP Brass RS	1	Each	.9841	.98
Regulator Screwed Globe 1 in. HP No. 1	1	Each	18.0550	18.06
Fittings	1	Lot		.81
Welds	1	Lot		.50

2542

Form 254-100M-7-53

## TRANSMISSION SYSTEM MEASURING STATION EQUIPMENT

6147

T. P. U. System

M D	ITEM	QUANTITY	UNIT	UNIT COST	AMOUNT
	<b>TEXAS ELECTRIC SERVICE COMPANY</b>				
	<b>RECORDING PSYCHROMETER</b>				
	Forboro Serial No. B-26288				
	Company No. P-1 Chart No.				
	89971 Range 0-120 degrees Fht.				
	with No. 6-A water box and				
	7-day clock	1	Each	178.3134	178.31
	Pipe Threaded and Coupled				
	(Random Lengths)				
	4 in. 11.000 lbs. per foot	2	Foot	.5885	1.18
	1/4 in. .430 lbs. per foot BM	6	Foot	.0310	.19
	Gate Valves Screwed				
	Walworth DD Brass RS				
	1 in. 125 lbs. SWP	3	Each	1.1434	3.43
	1/4 in. 125 lbs. SWP	2	Each	.5848	1.17
	Globe Valves Screwed				
	Lunkenheimer Brass RS				
	1/4 in. 200 lbs. SWP	1	Each	.9841	.98
	Fittings	1	Lot		3.83
	Welds	1	Lot		14.11
	<b>WATER COLUMN</b>				
	Acme 100 inch	1	Each	154.1760	154.18
	Gate Valve Screwed				
	Walworth Kay DD Brass				
	1/4 in. 125 lbs. SWP RS	1	Each	.5848	.58
	Regulators				
	Goldbug 1/2 in. HP Screwed	1	Each	12.1757	12.18
	Fittings	1	Lot		.69
	<b>GATE VALVES Flanged</b>				
	With bolts and gaskets				
	Crane IRBM Wedge				
	12 in. 175 lbs. SWP OS&Y CFBO	2	Each	80.6886	161.38
	Walworth DD				
	4 in. 175 lbs. OW&G WP NRS	1	Each	15.9046	15.90
	CFBO				
	<b>BACK PRESSURE VALVES Flanged</b>				
	With bolts and gaskets				
	Fisher Noiseless				
	4 in. Type 9-J No. 312174 CFBO	1	Each	33.4682	33.47
	<b>PIPE Threaded and coupled (Random Lengths)</b>				
		1	Lot		151.97
	<b>PIPE Plain End (Random Lengths)</b>				
		1	Lot		16.93



2543

## TRANSMISSION SYSTEM MEASURING STATION EQUIPMENT

T. P. U. System

6148-6154

ITEM	QUANTITY	UNIT	UNIT COST	AMOUNT
<u>TEXAS ELECTRIC SERVICE COMPANY</u>				
FITTINGS	1	Lot		\$ 181.33
WELDS	1	Lot		88.15
Material Cost				\$ 3,641.57
Installation				1,005.02
TOTAL COST INSTALLED				\$ 4,646.59
<u>ARAB GASOLINE COMPANY</u>				
METER				
Emco No. 4. Company No. 5584 500 lbs. VP with Wylie PV&T Recording Gauge No. 2099	1	Each	471.9596	\$ 471.96
GATE VALVES Flanged Complete with bolts and gaskets Westcott 2 in. 500 lbs. QW&G WP IBHM DD RS CFBO	3	Each	15.1383	45.41
GATE VALVES Screwed Lunkenheimer 1 1/2 in. 150 lbs. SWP DD Brass RS	2	Each	1.1573	2.31
PLUG VALVES Flanged Nordstrom 2 in. 150 lbs. SWP Complete with bolts and gas- kets CFBO	1	Each	10.0297	10.03
STOP COCKS Screwed Mueller 1 in. 125 lbs. WP IBHC	1	Each	.4312	.43
PIPE Threaded and Coupled (Random Lengths)	1	Lot		3.88
FITTINGS	1	Lot		17.48
Material Cost				\$ 551.50
Installation				156.63
TOTAL COST INSTALLED				\$ 708.13

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**PAGE**

## Defendant's Exhibit No. 28—Continued

[fols. 6155-6174]

Lone Star Gas Company  
Transmission Line Equipment  
Summary

Line	Reproduction Cost—New
A.....	\$3,806,446.39
B.....	3,250,794.92
C.....	585,900.29
E.....	1,781,320.58
F.....	1,068,427.82
G.....	1,848,791.83
H.....	1,685,720.90
J.....	523,829.27
K.....	5,153,684.18
L.....	2,962,144.38
M.....	1,449,864.48
O.....	5,089,344.08
R.....	640,531.76
Numbered.....	1,355,528.42
T. P. U.....	692,110.10
Grand Total.....	<u>\$31,894,439.40</u>

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2547

## TRANSMISSION LINE EQUIPMENT

6175

"A" System

ITEM	QUANTITY	UNIT	UNIT COST	AMOUNT
<u>LINE A-12</u> (Cont'd)				
FITTINGS	1	Lot		37.69
GATE VALVE PITS				
Wood; with covers and locks				
4 ft. x 4 ft. in plan x 4 ft.				
5 in. deep	1	Each	24.8300	24.83
4 ft. x 4 ft. in plan x 4 ft.				
4 in. deep	1	Each	24.3200	24.32
TOTAL LINE A-12				3,881.60
<u>LINE A-13</u>				
FROM LINE A, WICHITA COUNTY, TO BURKBURNETT, WICHITA COUNTY, TEXAS				
PIPE Installed in Place				
Threaded and Coupled				
6 in. 19.450 lbs. per foot	45	Foot	1.1549	51.97
GATE VALVES Screwed				
Ludlow 6 in. 1500 lb. T No.				
8 IHBM DD NRS	1	Each	64.9454	64.95
FITTINGS	1	Lot		23.07
TOTAL LINE A-13				139.99
<u>LINE A-14</u>				
FROM LINE A, HARDEMAN COUNTY, TO WEST TEXAS UTILITIES COMPANY, LAKE PAULINE, HARDEMAN COUNTY, TEXAS				
PIPE Installed in Place				
Plain End.				
8 in. 25.062 lbs. per foot	18,355	Foot	1.1812	21,680.93
COUPLINGS Dresser Complete				
8 in.	918	Each	2.6876	2,467.22

2548

Form 84-10M-4-52

## TRANSMISSION LINE EQUIPMENT

"A" System

6176-6205

d k	ITEM	QUANTITY	UNIT	UNIT COST	AMOUNT
	<u>LINE A-14 (Cont'd)</u>				
	GATE VALVES Flanged CFBO				
	Crane 4 in. 1000 lb. T IBBM	1	Each	35.7335	35.73
	DD OS&Y				
	Walsorth 8 in. 700 lb. T IBBM	2	Each	77.0178	154.04
	DD OS&Y				
	GATE VALVES Screwed				
	Powell White Star 1 in. 300	1	Each	6.1669	6.17
	1b. SVP Brass HRS				
	SPECIAL CONSTRUCTION				
	Highway Crossing				
	8 in.	58	Foot	2.9908	173.47
	Railroad Crossing				
	8 in.	58	Foot	2.9908	173.47
	Line Blocking Concrete	1	Lot		65.01
	FITTINGS	1	Lot		145.74
	GATE VALVE PITS				
	Concrete; with cover and lock				
	5 ft. x 5 ft. 1-3/4 in. in	1	Each	135.3500	135.35
	plan x 5 ft. 8 in. deep				
	5 ft. x 5 ft. in plan x 8 ft.	1	Each	183.8000	183.80
	2 in. deep				
	TOTAL LINE A-14				25,220.93
	<u>LINE A-15</u>				
	FROM LINE A TO BARTEX PIPE LINE				
	COMPANY, WILBARGER COUNTY, TEXAS				
	PIPE Installed in Place				
	Plain End				
	6 in. 18,970 lbs. per foot	91	Foot	1.0193	92.76
	WELDS				
	6 in.	5	Each	2.2640	11.32
	GATE VALVES Flanged CFBO				
	Darling 6 in. 700 lb. T IBBM	1	Each	43.8687	43.87
	DD HRS				
	FITTINGS	1	Lot		11.98

2510

## TRANSMISSION LINE EQUIPMENT

"B" System

6206

ITEM	QUANTITY	UNIT	UNIT COST	AMOUNT
<b>LINE B-10 (Cont'd)</b>				
<b>GATE VALVE PIT</b> Wood; complete with cover and lock 4 ft. x 4 ft. in plan x 2 ft. 10 in. deep; 2 in. walls	1	Each	13.9000	\$ 13.90
<b>TOTAL LINE B-10</b>				\$ 1,919.32
<b>LINE B-11</b>				
<b>FROM LINE B, WISE COUNTY, TO NEWARK, WISE COUNTY, TEXAS</b>				
<b>PIPE Installed in Place</b> Plain End 2 in. 3.652 lbs. per foot	6,509	Foot	.3335	\$ 2,170.75
<b>WELDS</b> 2 in.	303	Each	.8006	242.58
<b>GATE VALVES Flanged CF80</b> Westcott IHBM DD HRS 2 in. 500 lb. OWG WP	1	Each	15.7438	15.74
<b>GATE VALVE PIT</b> Wood; complete with covers and locks 4 ft. 4 in. x 4 ft. in plan x 3 ft. deep; 2 in. walls	1	Each	16.1900	16.19
<b>TOTAL LINE B-11</b>				\$ 2,445.26
<b>LINE B-12</b>				
<b>FROM LINE B TO TRINITY PORTLAND CEMENT COMPANY, TARRANT COUNTY, TEXAS</b>				
<b>PIPE Installed in Place</b> Plain End 10 in. 31.445 lbs. per foot 8 in. 25.062 lbs. per foot	1,517 3,180	Foot Foot	1.5495 1.2263	\$ 2,350.59 3,899.63



2550

Form 254-10M-6-58

## TRANSMISSION LINE EQUIPMENT

"B" System

6207

ITEM	QUANTITY	UNIT	UNIT COST	AMOUNT
<u>LINE B-12 (Cont'd)</u>				
<u>WELDS</u>				
10 in.	77	Each	3.8661	297.69
8 in.	159	Each	2.9779	473.49
<u>GATE VALVES Flanged CF80</u>				
Crane IBHM DD OS&Y				
8 in. 1000 lb. T.	1	Each	89.7244	89.72
<u>GATE VALVES Screwed</u>				
Walworth IBHM DD OS&Y				
4 in. 700 lb. T.	1	Each	27.7646	27.76
Westcott IBHM DD NRS				
8 in. 800 lb. CWG WP	1	Each	102.6617	102.66
<u>NEEDLE VALVES Screwed</u>				
Lunkheimer Brass				
1/4 in. 125 lb. SWP	1	Each	.6293	.63
<u>SPECIAL CONSTRUCTION</u>				
Railroad Crossing				
10 in.	46	Feet	3.8578	177.46
<u>FITTINGS</u>	1	Lot		95.49
<u>GATE VALVE PITS</u>				
Concrete; complete with cover and lock				
4 ft. x 4 ft. in plan x 5 ft. 2 in. deep; 6 in. walls	1	Each	101.2600	101.26
<u>TOTAL LINE B-12</u>				<u>\$ 7,616.38</u>
<u>LINE B-13</u>				
<u>FROM LINE B TO CHICO, WISE COUNTY, TEXAS</u>				
<u>PIPE Installed in Place</u>				
Plain End				
4 in. 10,790 lbs. per foot (Double Length)	27,725	Feet	.5294	\$ 14,677.62
<u>WELDS</u>				
4 in.	1,289	Each	1.5286	1,970.37

2551

Form 24-10M-5-53

## TRANSMISSION LINE EQUIPMENT

"B" System

6208-6221

ITEM	QUANTITY	UNIT	UNIT COST	AMOUNT
<u>LINE B-13 (Cont'd)</u>				
GATE VALVES Flanged CFBO				
Walworth IBBM ID OS&Y				
4 in. 700 lb. T.	1	Each	32.2646	32.26
2 in. 700 lb. T.	1	Each	17.2655	17.27
BLOW-OFF				
2 in. complete with valves and fittings	1	Each	11.3400	11.34
FITTINGS	1	Lot		16.36
GATE VALVE PIT				
Concrete; complete with cover and lock				
4 ft. 6 in. x 4 ft. 6 in. in plan x 3 ft. 6 in. deep; 6 in. walls	1	Each	87.9000	87.90
TOTAL LINE B-13				\$ 16,813.12
<u>HOLLOWAY FUEL LINE</u>				
<u>FROM LINE B TO HOLLOWAY LEASE, CLAY COUNTY, TEXAS.</u>				
PIPE Installed in Place Threaded and Coupled				
2 in. 3.750 lbs. per foot	10,726	Foot	.3206	3,438.76
GATE VALVES Screwed				
Westcott IBBM ID NRS				
2 in. 1200 lb. CWG WP	1	Each	19.4032	19.40
2 in. 500 lb. CWG WP	1	Each	12.7711	12.77
FITTINGS	1	Lot		2.76
TOTAL HOLLOWAY FUEL LINE				\$ 3,473.69

2552

Form 864, 195M 7-53

## TRANSMISSION LINE EQUIPMENT

"C" System

6222-6230

ITEM	QUANTITY	UNIT	UNIT COST	AMOUNT
<u>LINE C-5-1</u>				
<u>FROM LINE C-5 TO TARRANT COUNTY</u> <u>POOR FARM, TARRANT COUNTY, TEXAS</u>				
PIPE Installed in Place Threaded and Coupled 2 in. 3.750 lbs. per foot	1,414	Foot	.3664	518.09
GATE VALVES Screwed P & M 2 in. 1000 lb. T IRHM NRS	1	Each	13.0389	13.04
FITTINGS	1	Lot		1.20
TOTAL LINE C-5-1				532.33
<u>LINE C-7</u>				
<u>FROM LINE C TO WILD BRIAR FARM,</u> <u>DALLAS COUNTY, TEXAS</u>				
PIPE Installed in Place Plain End 2 in. 3.652 lbs. per foot	3,495	Foot	.3711	1,296.99
WELDS 2 in.	163	Each	.8873	144.63
GATE VALVES Flanged Complete with bolts and gaskets Crane 2 in. 1000 lb. T IRHM DD OS&Y CFBO	1	Each	19.3618	19.36
CURB BOXES No. 0 CI Top	1	Each	5.3785	5.38
SPECIAL CONSTRUCTION Road Crossing 2 in.	22	Foot	1.7472	38.44
BLOW OFF 1 in. Complete with valve and fittings	1	Each	2.0800	2.08
FITTINGS	1	Lot		28.13
TOTAL LINE C-7				1,535.01

2558

## TRANSMISSION LINE EQUIPMENT

"E" System

6231

ITEM	QUANTITY	UNIT	UNIT COST	AMOUNT
<u>LINE E-2 (Cont'd)</u>				
GATE VALVE PITS Concrete; With Cover and Lock 4 ft. 6 in. x 4 ft. 6 in. in plan x 4 ft. 6 in. deep	1	Each	105.33	\$ 105.33
TOTAL LINE E-2				\$ 50,688.13
<u>LINE E-3</u>				
<u>FROM LINE E TO WHITESBORO, GRAYSON COUNTY, TEXAS</u>				
PIPE Installed in Place Plain End 4 in. 10.790 lbs. per foot	4,710	Feet	.5274	\$ 2,484.05
WELDS 4 in.	219	Each	1.5297	335.00
GATE VALVES Flanged CF80 Crane IRBM DE 03&Y 2 in. 700 lbs. T	2	Each	17.2449	34.49
BLOW-OFFS Complete with Valves and Fittings 2 in.	1	Each	16.22	16.22
GAS CLEANER Complete with Valves and Fittings 18 in. x 9 ft. 10 in.	1	Each	246.07	246.07
FITTINGS	1	Lot		12.28
TOTAL LINE E-3				\$ 3,128.11
<u>LINE E-4</u>				
<u>FROM LINE E TO GIRLS TRAINING SCHOOL, COOKE COUNTY, TEXAS</u>				
PIPE Installed in Place Threaded and Coupled 4 in. 11.000 lbs. per foot	9,595	Feet	.6433	\$ 6,172.46

2554

Form 254-10M-9-52

## TRANSMISSION LINE EQUIPMENT

6232-6265

"E" System

ITEM	QUANTITY	UNIT	UNIT COST	AMOUNT
<u>LINE E-4 (Cont'd)</u>				
GATE VALVES Flanged CF80				
Ludlow IBEM DD NRS				
4 in. 1000 lb. T	1	Each	30.6460	30.65
Westcott IBEM DD NRS				
2 in. 250 lb. OWG WP	1	Each	11.0669	11.07
SPECIAL CONSTRUCTION				
Railroad Crossings				
4 in.	60	Foot	2.3402	140.41
FITTINGS	1	Lot		22.53
GATE VALVE PIT				
Wood, complete with cover and lock				
3 ft. 6 in. x 3 ft. 8 in. in plan x 4 ft. 3 in. deep	1	Each	18.1400	18.14
TOTAL LINE E-4				<u>\$ 6,395.26</u>

2555

284-100M-7-83

## TRANSMISSION LINE EQUIPMENT

6266-6274

"P" System

ITEM	QUANTITY	UNIT	UNIT COST	AMOUNT
<u>LINE F-7 (Cont'd)</u>				
GATE VALVES Flanged Complete with bolts and gaskets Crane 4 in. 125 lb. S&P IBRM Wedge OS&Y CYBO	1	Each	19.7690	19.77
BLOW OFF Complete with valve and fittings 2 in.	1	Each	6.3200	6.32
GAS CLEANER 18 in. x 10 ft. including valves fittings and founda- tion	1	Each	227.5800	227.58
FITTINGS	1	Lot		13.28
GATE VALVE PIT Pipe 16 in. in diameter x 14 in. deep	1	Each	2.2260	2.23
TOTAL LINE F-7				\$ 9,061.44
<u>LINE F-8</u>				
FROM LINE F, DENTON COUNTY, TO ACME BRICK COMPANY, DENTON COUNTY, TEXAS				
PIPE Installed in Place Plain End 4 in. 10.790 lbs. per foot	23,277	Foot	.5829	\$ 13,568.16
COUPLINGS Dresser 4 in.	1,083	Each	1.4129	1,530.17
FITTINGS	1	Lot		75.21
TOTAL LINE F-8				\$ 15,173.54
<u>LINE F-9</u>				
FROM LINE F TO CARROLLTON, DALLAS COUNTY, TEXAS				
PIPE Installed in Place Plain End 3 in. 7.575 lbs. per foot	19,655	Foot	.4780	\$ 9,395.09

2556

Form 234 100M 7-53

## TRANSMISSION LINE EQUIPMENT

"G" System

6275-6305

ITEM	QUANTITY	UNIT	UNIT COST	AMOUNT
<u>LINE G (Cont'd)</u>				
GATE VALVE PITS				
Concrete; complete with covers and locks (Cont'd)				
7 ft. x 7 ft. in plan x 7 ft. 7 in. deep	1	Each	244.4100	244.41
7 ft. 1 in. x 7 ft. 2-1/2 in. in plan x 7 ft. 4 in. deep	1	Each	253.4400	253.44
7 ft. 2 in. x 7 ft. 2 in. in plan x 6 ft. 6 in. deep	1	Each	253.5900	253.59
14 ft. x 6 ft. in plan x 6 ft. 6 in. deep	1	Each	372.6100	372.61
7 ft. x 6 ft. 11 in. in plan x 6 ft. deep	1	Each	210.4700	210.47
Concrete; without covers and locks				
9 ft. 8 in. x 15 ft. 11-3/4 in. in plan x 6 ft. deep	1	Each	397.4800	397.48
TOTAL LINE G				\$815,039.50
<u>LINE G-1</u>				
<u>FROM LINE G, TO PRODUCERS REFINING COMPANY, COOKE COUNTY, TEXAS</u>				
PIPE Installed in Place				
Plain End				
4 in. 10.790 lbs. per foot	6,068	Foot	.5183	3,145.04
COUPLINGS Dresser				
Complete with bolts and rubbers				
4 in.	282	Each	1.4129	398.44
FITTINGS	1	Lot		20.68
TOTAL LINE G-1				\$ 3,564.16
<u>LINE G-2</u>				
<u>FROM LINE G, TO MARIETTA, LOVE COUNTY, OKLAHOMA</u>				
PIPE Installed in Place				
Plain End				
4 in. 10.790 lbs. per foot	57,051	Foot	.5305	\$30,265.56



2557

## TRANSMISSION LINE EQUIPMENT

"H" System

6306-6336

ITEM	QUANTITY	UNIT	UNIT COST	AMOUNT
<u>LINE H-2</u>				
FROM LINE H, CLAY COUNTY, TO PETROLIA REGULATOR, CLAY COUNTY, TEXAS				
PIPE Installed in Place Threaded and Coupled 2 in. 3.750 lbs. per foot	776	Foot	.3135	\$ 243.28
GATE VALVES Screwed Darling IRBM DD NRS 2 in. 1000 lb. T. No. 101	3	Each	13.1367	39.41
FITTINGS	1	Lot		9.49
GATE VALVE PITS Wood complete with cover and locks 3 ft. x 3 ft. in plan x 2 ft. deep	1	Each	9.0900	9.09
TOTAL LINE H-2				\$ 301.27
<u>LINE H-3</u>				
FROM LINE H, COTTON COUNTY, TO MAURIKA, JEFFERSON COUNTY, OKLAHOMA				
PIPE Installed in Place Plain End 4 in. 10.790 lbs. per foot	63,551	Foot	.5358	\$ 34,050.63
WELDS 4 in.	2,955	Each	1.5073	4,454.07
GATE VALVES Flanged CF80 Valworth IRBM DD OS&Y 4 in. 700 lb. T	1	Each	32.2646	32.26
Westcott IRBM DD NRS 4 in. 800 lb. T	1	Each	43.1468	43.15
SAFETY VALVES Flanged CF80 Lunkenheimer Non-return 4 in. 250 lb. WP OS&Y	2	Each	92.2026	184.41

2558

Form 314-100M-7-53

## TRANSMISSION LINE EQUIPMENT

6337-6353

"J" System

LINE B	ITEM	QUANTITY	UNIT	UNIT COST	AMOUNT
	<u>LINE J-2-6 (Cont'd)</u>				
	FITTINGS	1	Lot		3.28
	GATE VALVE PITS Wood; complete with covers and locks 4 ft. x 4 ft. in plan x 2 ft. 9 in. deep	1	Each	14.5400	14.54
	TOTAL LINE J-2-6				145.37
	<u>LINE J-2-7</u>				
	<u>FROM LINE J-2 TO CENTRAL HANDLEY MEASURING STATION, TARRANT COUNTY, TEXAS</u>				
	FITTINGS	1	Lot		2.06
	TOTAL LINE J-2-7				2.06
	<u>LINE J-2-8</u>				
	<u>FROM LINE J-2 TO GIFFORD HILL GRAVEL COMPANY, DALLAS COUNTY, TEXAS</u>				
	PIPE Installed in Place Plain End 4 in. 10.790 lbs. per foot 2 in. 3.652 lbs. per foot	5,894 5	Foot Foot	.5030 .2719	2,964.68 1.36
	WELDS 4 in. 2 in.	298 1	Each Each	1.5350 1.3597	457.43 1.36
	GATE VALVES Flanged Complete with bolts and gaskets Ludlow IRBM ED 4 in. 700 lb. T NRS CFBO	1	Each	27.7805	27.78
	FITTINGS	1	Lot		13.53
	GATE VALVE PITS Corrugated Galvanized Iron, with cover 2 ft. diameter x 2 ft. deep	1	Each	9.5700	9.57
	TOTAL LINE J-2-8				3,475.71

2559

## TRANSMISSION LINE EQUIPMENT

6354-6388

"K" System

ITEM	QUANTITY	UNIT	UNIT COST	AMOUNT
<u>LINE K-3 (Cont'd)</u>				
GATE VALVE PITS				
Wood, complete with covers and locks				
4 ft. 3-1/2 in. x 4 ft. x 5 ft.	1	Each	40.7100	40.71
Cast Iron, complete with cover and lock				
Curb box 24 x 36 in.	1	Each	15.4800	15.48
TOTAL LINE K-3				\$ 3,878.14
<u>LINE K-4</u>				
FROM LINE K TO WAYLAND, STEPHENS COUNTY, TEXAS				
PIPE Installed in Place				
Threaded and Coupled				
2 in. 3.716 lbs. per foot	3	Foot	.3730	1.12
FITTINGS	1	Lot		.54
TOTAL LINE K-4				\$ 1.66
<u>LINE K-5</u>				
FROM LINE K, HOOD COUNTY TO VALLEY MILLS, BOSQUE COUNTY, TEXAS				
PIPE Installed in Place				
Plain End				
6 in. 18.974 lbs. per foot	20,944	Foot	.8985	18,818.18
double lengths				
6 in. 18.974 lbs. per foot	101,078	Foot	.8821	89,160.90
4 in. 10.790 lbs. per foot	94,677	Foot	.5430	51,409.61
3 in. 7.575 lbs. per foot	43,553	Foot	.4855	21,144.98
2 in. 3.652 lbs. per foot	57	Foot	.3100	17.67
TUBING Seamless				
Plain End				
6 in. 23.000 lbs. per foot	71,913	Foot	1.5010	107,941.41

2560

Form 24-100-0-2

## TRANSMISSION LINE EQUIPMENT

6389-6430

## "K" System

ITEM	QUANTITY	UNIT	UNIT COST	AMOUNT
<b>ABILENE AIRPORT TAP</b>				
<b>FROM LINE K-C AIRPORT, ABILENE, TAYLOR COUNTY, TEXAS</b>				
<b>PIPE Installed in Place</b>				
Plain End				
2 in. 3.652 lbs. per foot	5,631	Foot	.3493	\$ 1,966.91
<b>WELDS</b>				
2 in.	262	Each	.7966	209.23
<b>FITTINGS</b>				
	1	Lot	11.3200	11.32
<b>TOTAL ABILENE AIRPORT TAP</b>				<b>\$ 2,187.46</b>
<b>LINE K-C-2</b>				
<b>FROM LINE K-C TO MORAN, SHACKELFORD COUNTY, TEXAS</b>				
<b>PIPE Installed in Place</b>				
Plain End				
4 in. 10.790 lbs. per foot	10	Foot	.5774	5.77
6 in. 18.974 lbs. per foot	285	Foot	.8897	253.56
10 in. 31.445 lbs. per foot	4,611	Foot	1.5736	7,255.87
<b>WELDS</b>				
10 in.	235	Each	3.7352	877.77
6 in.	14	Each	2.2957	32.14
4 in.	1	Each	2.6473	2.65
<b>GATE VALVES Flanged CF80</b>				
Complete with bolts and gaskets				
Luglow IREM DD				
6 in. 1500 lbs. T No. 8 NRS	1	Each	86.2998	86.30
Walworth IREM DD				
10 in. 700 lbs. T OSBY	1	Each	125.8080	125.81
<b>GATE VALVES Screwed</b>				
Derling IREM DD				
6 in. 1000 lbs. T NRS	1	Each	44.2138	44.21
Powell Brass Wedged				
1/4 in. 125 lbs. SUP	1	Each	.9531	.95
Walworth IREM DD				
2 in. 1000 lbs. T OSBY	1	Each	17.1285	17.13
Westcott IREM DD				
4 in. 500 lbs. OSBY	2	Each	30.9658	61.93
<b>FITTINGS</b>				
	1	Lot		95.30

2561

## TRANSMISSION LINE EQUIPMENT

6431

"L" System

ITEM	QUANTITY	UNIT	UNIT COST	AMOUNT
<u>LINE L-8-7</u>				
<u>FROM LINE L-8 TO CALVERT,</u> <u>ROBERTSON COUNTY, TEXAS</u>				
PIPE Installed in Place Plain End 3 in. 7.575 lbs. per foot	44	Foot	.6510	\$ 28.64
WELDS 3 in.	2	Each	1.5000	3.00
GATE VALVES Flanged CFBO Walworth OS&Y 6 in. 700 lb. T.	1	Each	50.9057	50.91
3 in. 700 lb. T.	2	Each	25.2280	50.46
BLOW-OFFS 3 in. complete with flanges, valves and fittings	2	Each	54.0900	108.18
FITTINGS	1	Lot		23.83
GATE VALVE PITS Concrete; complete with cover and lock 5 ft. x 5 ft. in plan x 4 ft. 6 in. deep	1	Each	112.4100	112.41
TOTAL LINE L-8-7				\$ 377.43
<u>PERRY GIN TAP</u>				
<u>FROM LINE L-8 TO PERRY GIN,</u> <u>FALLS COUNTY, TEXAS.</u>				
PIPE Installed in Place Plain End 2 in. 3.652 lbs. per foot	875	Foot	.2925	\$ 255.94
WELDS 2 in.	41	Each	.7963	32.65
GATE VALVES Screwed Crane IRRM DD OS&Y 2 in. 1000 lb. T	1	Each	17.0461	17.05

2562

Form 264-10M-4-52

## TRANSMISSION LINE EQUIPMENT

"L" System

6432-6448

m g	ITEM	QUANTITY	UNIT	UNIT COST	AMOUNT
	<u>PERRY GIN TAP (Cont'd)</u>				
	SPECIAL CONSTRUCTION Railroad Crossing 2 in.	102	Foot	2.5237	\$ 257.42
	FITTINGS	1	Lot		5.92
	GATE VALVE PITS Wood; complete with cover and lock 3 ft. 3 in. x 3 ft. 3 in. in plan x 4 ft. 1 in. deep; 2 in. walls	1	Each	27.9300	27.93
	TOTAL PERRY GIN TAP				\$ 596.91
	<u>LINE L-9</u>				
	<u>FROM LINE L TO WACO, McLENNAN COUNTY, TEXAS</u>				
	PIPE Installed in Place Plain End 12 in. 33.375 lbs. per foot	12,980	Foot	1.6292	\$ 21,147.02
	COUPLINGS Dresser Complete with bolts and rubbers 12 in.	662	Each	3.8496	2,548.44
	GATE VALVES Flanged Complete with bolts and gaskets Atwood 12 in. 400 lb. GWP IBEM DD NRS. with 2 cast steel flanges with 12 in. x 5 ft. Vanstone Nipples	1	Each	200.9991	201.00
	GATE VALVES Flanged CFBO Crane IBEM DD OS&Y 4 in. 1000 lb. T.	1	Each	35.7335	35.73
	BLOW-OFF 6 in. complete with valves and fittings	1	Each	72.3200	72.32
	FITTINGS	1	Lot		159.91

2563

Form 54-10M-6-53

## TRANSMISSION LINE EQUIPMENT

6449

"L" System

ITEM	QUANTITY	UNIT	UNIT COST	AMOUNT
<u>LINE L-23</u> (Cont'd)				
GATE VALVES Flanged CFBO (Cont'd) Walworth IBBM DD OS&Y 6 in. 700 lb. T.	3	Each	50.9057	\$ 152.72
PLUG VALVES Flanged CFBO Nordstrom 2 in. 250 lb. WP	1	Each	15.4336	15.43
BLOW-OFFS Complete with valves and fittings	4	Each	42.5800	170.32
FITTINGS	1	Lot		41.44
GATE VALVE PITS Concrete; complete with covers and locks 7 ft. 6 in. x 7 ft. 6 in. in plan x 7 ft. 6 in. deep	1	Each	280.9400	280.94
4 ft. 6 in. x 4 ft. 6 in. in plan x 7 ft. deep	1	Each	146.7500	146.75
4 ft. 6 in. x 4 ft. 6 in. in plan x 5 ft. deep	1	Each	96.7100	96.71
TOTAL LINE L-23				\$ 1,091.85
<u>LINE L-24</u>				
FROM LINE L TO ATLAS PORTLAND CEMENT COMPANY, McLENNAN COUNTY, TEXAS				
PIPE Installed in Place Plain End 8 in. 25.062 lbs. per foot	30,754	Foot	1.2561	\$ 38,630.10
WELDS 8 in.	2,538	Each	2.9750	4,575.55
PLUG VALVES Flanged CFBO Nordstrom 8 in. 250 lb. WP	3	Each	149.1760	447.53
4 in. 250 lb. WP	1	Each	45.8848	45.88



2564

Form 124 10-1-59

## TRANSMISSION LINE EQUIPMENT

"L" System

6450-6467

ITEM	QUANTITY	UNIT	UNIT COST	AMOUNT
<u>LINE L-24</u> (Cont'd)				
PLUG VALVES Screwed Barco 4 in. 250 lb. WP	1	Each	30.1840	30.18
Nordstrom 1 in. 250 lb. WP	2	Each	5.6640	11.33
SPECIAL CONSTRUCTION Highway Crossings 8 in.	60	Foot	3.7539	225.23
Railroad Crossings 8 in.	120	Foot	3.7539	450.47
BLOW-OFFS Complete with flanges, valves and fittings	2	Each	28.4900	56.98
FITTINGS	1	Lot		117.60
GATE VALVE PITS Concrete; complete with cover and lock 5 ft. x 5 ft. in plan x 4 ft. 6 in. deep	1	Each	117.8600	117.86
TOTAL LINE L-24				\$ 44,708.71
<u>LINE L-24-1</u>				
FROM LINE L-24 TO HEWITT, McLENNAN COUNTY, TEXAS				
PIPE Installed in Place Plain End 2 in. 3.652 lbs. per foot	669	Foot	.4290	287.00
WELDS 2 in.	31	Each	1.3697	42.46
PLUG VALVES Screwed Nordstrom 2 in. 150 lb. WP	1	Each	9.1458	9.15
FITTINGS	1	Lot		.75

25650

## TRANSMISSION LINE EQUIPMENT

6468-6469

"M" System

ITEM	QUANTITY	UNIT	UNIT COST	AMOUNT
<u>LINE M-6-2 (Cont'd)</u>				
GATE VALVE PITS Wood; complete with cover and lock 5 ft. x 5 ft. 4 in. in plan x 4 ft. deep	1	Each	36.9600	36.96
TOTAL LINE M-6-2				143.34
<u>LINE M-6-3</u>				
<u>FROM LINE M-6 TO BARRY, HAVARRO COUNTY, TEXAS</u>				
PIPE Installed in Place Plain End 2 in. 3.652 lbs. per foot	10	Foot	.5042	5.04
WELDS 2 in.	1	Each	1.3597	1.36
GATE VALVES Flanged CFBO Walworth IREM DD ORZY 2 in. 700 lbs. Y	1	Each	17.2655	17.27
BLOW OFF Complete with valves and fittings 2 in.	1	Each	10.4200	10.42
FITTINGS	1	Lot		1.33
GATE VALVE PITS Wood; complete with cover and lock 3 ft. 6 in. x 3 ft. 6 in. in plan x 4 ft. 2 in. deep	1	Each	21.4500	21.45
TOTAL LINE M-6-3				56.87
<u>LINE M-7</u>				
<u>FROM LINE M TO FORRESTON (INCLUDING TAP TO GIN) ELLIS COUNTY, TEXAS</u>				
PIPE Installed in Place Threaded and Coupled 2 in. 3.750 lbs. per foot	6,275	Foot	.2881	1,807.83

2566

Form 244-100M-1-54

## TRANSMISSION LINE EQUIPMENT

6470-6477

"X" System

ITEM	QUANTITY	UNIT	UNIT COST	AMOUNT
<u>LINE M-10</u>				
<u>FROM LINE M TO HASH GIN COMPANY,</u> <u>ELLIS COUNTY, TEXAS</u>				
PIPE Installed in Place				
Plain End				
2 in. 3.652 lbs. per foot	37	Foot	.4397	16.27
WELDS				
2 in.	2	Each	1.0100	2.02
GATE VALVES Screwed				
Rensselaer IIBM DD NRS				
2 in. 600 lbs. T	1	Each	11.1188	11.12
FITTINGS	1	Lot		2.70
TOTAL LINE M-10				32.11
<u>LINE M-11</u>				
<u>FROM LINE M, LIMESTONE COUNTY, TEXAS</u> <u>TO LINE L, HILL COUNTY, TEXAS</u>				
PIPE Installed in Place				
Plain End				
10 in. 31.445 lbs. per foot	197,351	Foot	1.4890	\$293,855.64
8 in. 25.062 lbs. per foot	35,507	Foot	1.0957	38,905.02
WELDS				
10 in.	10,065	Each	3.7351	37,593.78
COUPLINGS Dresser				
Complete with bolts and rubbers				
8 in.	1,775	Each	2.6876	4,770.49
GATE VALVES Flanged CYBO				
Crane IIBM DD OS&Y				
4 in. 1000 lbs. T	1	Each	35.7335	35.73
Darling IIBM DD NRS				
8 in. 700 lbs. T	1	Each	66.1935	66.19
Walworth IIBM DD OS&Y				
10 in. 700 lbs. T	1	Each	125.8080	125.81
Walworth IIBM DD OS&Y				
8 in. 700 lbs. T	3	Each	77.0178	231.05

2567

## TRANSMISSION LINE EQUIPMENT

6478

"M" System

m 256-100M-7-59

ITEM	QUANTITY	UNIT	UNIT COST	AMOUNT
<u>LINE M-11-8 (Cont'd)</u>				
PLUG VALVES Screwed Barco 2 in. 250 lbs. WP	1	Each	8.1920	8.19
BLOW OFF Complete with valves and fittings 2 in.	1	Each	11.0900	11.09
FITTINGS	1	Lot		8.91
GATE VALVE PITS Concrete; complete with cover and lock 4 ft. 6 in. x 4 ft. 6 in. in plan x 4 ft. 6 in. deep	1	Each	100.3400	100.34
TOTAL LINE M-11-8				\$ 6,223.44
<u>LINE M-12</u>				
FROM LINE M-11 TO STATE ORPHAN'S HOME, NAVARRO COUNTY, TEXAS				
PIPE Installed in Place 4 in. 10.790 lbs. per foot	4,738	Foot	.5235	2,480.34
WELDS 4 in.	220	Each	1.5282	336.20
GATE VALVES /Flanged CF80 Ludlow IREM DD NRS 2 in. 1000 lbs. T	1	Each	15.3685	15.37
GATE VALVES Screwed Crane IREM DD OS&Y 4 in. 1000 lbs. T	1	Each	35.7335	35.73
SPECIAL CONSTRUCTION Railroad Crossing 4 in.	21.67	Foot	2.9245	63.37
FITTINGS	1	Lot		18.42

2568

Form 254-100M-7-83

## TRANSMISSION LINE EQUIPMENT

6479

## "M" System

eg	ITEM	QUANTITY	UNIT	UNIT COST	AMOUNT
	<u>LINE M-12 (Cont'd)</u>				
	GATE VALVE PITS				
	Wood; complete with covers and locks				
	2 ft. 3-1/2 in. x 3 ft. in plan x 2 ft. deep	1	Each	7.8900	7.89
	Concrete; complete with covers and locks				
	4 ft. 6 in. x 4 ft. 6 in. in plan x 5 ft. deep	1	Each	110.9000	110.90
	TOTAL LINE M-12				3,068.22
	<u>LINE M-13</u>				
	FROM LINE M TO MAGNOLIA PETROLEUM COMPANY REFINERY, NAVARRO COUNTY, TEXAS				
	PIPE Installed in Place				
	Plain End				
	8 in. 25.062 lbs. per foot	2,758	Foot	1.1049	3,047.31
	WELDS				
	8 in.	138	Each	2.9828	411.63
	GATE VALVES Flanged CPBO				
	Crane IBEM Wedge NRS				
	8 in. 250 lbs. SWP	1	Each	98.1513	98.15
	Walworth IBEM DD OS&Y				
	10 in. 700 lbs. T	1	Each	125.8080	125.81
	Walworth IBEM DD OS&Y				
	8 in. 700 lbs. T	2	Each	77.0178	154.04
	GATE VALVES Screwed				
	Crane IBEM Wedge NRS				
	2 in. 125 lbs. SWP	1	Each	5.0534	5.05
	SPECIAL CONSTRUCTION				
	Highway Crossing				
	8 in.	68	Foot	3.0455	207.09
	BLOW OFFS				
	Complete with valves and fittings				
	3 in.	2	Each	42.1500	84.30
	2 in.	1	Each	29.0780	29.07

2569

## TRANSMISSION LINE EQUIPMENT

"M" System

6480-6481

ITEM	QUANTITY	UNIT	UNIT COST	AMOUNT
<u>LINE M-13 (Cont'd)</u>				
<b>GAS CLEANERS</b>				
Complete with valves, fittings and concrete foundations	1	Each	1081.0300	\$ 1,081.03
30 in. diameter x 12 ft.	1	Each	1216.3300	1,216.33
30 in. diameter x 11 ft. 6 in.				
<b>FITTINGS</b>	1	Lot		37.11
<b>GATE VALVE PITS</b>				
Concrete, complete with covers and locks				
5 ft. x 5 ft. in plan x 6 ft. 6 in. deep	1	Each	170.8700	170.87
5 ft. 6 in. x 5 ft. 6 in. in plan x 6 ft. 3 in. deep	1	Each	170.3400	170.34
<b>TOTAL LINE M-13</b>				\$ 6,838.13
<u>LINE M-14</u>				
<u>FROM LINE M TO MILFORD, ELLIS COUNTY, TEXAS</u>				
<b>PIPE Installed in Place</b>				
Plain End				
4 in. 10.790 lbs. per foot	33,654	Foot	.5844	\$ 19,667.40
3 in. 7.575 lbs. per foot	26,103	Foot	.5049	13,179.40
<b>WELDS</b>				
3 in.	1,214	Each	1.1821	1,435.07
4 in.	1,565	Each	1.5195	2,378.02
<b>GATE VALVES Flanged CF80</b>				
Pratt and Cady IBBM OS&Y				
4 in. 250 lbs. SWP	1	Each	44.6392	44.64
<b>GATE VALVES Screwed</b>				
Crane IBBM DD NRS				
2 in. 700 lbs. T	1	Each	11.4937	11.49
<b>PLUG VALVES Screwed</b>				
Nordstrom				
3 in. 250 lbs. WP	1	Each	17.2295	17.23

2570

Form 251-100M-7-33

## TRANSMISSION LINE EQUIPMENT

6482

"M" System

eg	ITEM	QUANTITY	UNIT	UNIT COST	AMOUNT
	<u>LINE M-14-1 (Cont'd)</u>				
	GATE VALVE PITS				
	Wood; complete with covers and locks				
	3 ft. 3 in. x 3 ft. 6 in. in plan x 3 ft. deep	1	Each	15.9000	\$ 15.90
	3 ft. x 3 ft. 4 in. in plan x 3 ft. deep	1	Each	16.0800	16.08
	TOTAL LINE M-14-1				\$ 141.13
	<u>LINE M-15</u>				
	<u>FROM LINE M TO POWELL FIELD, NAVARRO COUNTY, TEXAS</u>				
	PIPE Installed in Place				
	Threaded and Coupled				
	4 in. 11,000 lbs. per foot	10,246	Foot	.6307	\$ 6,462.15
	2 in. 3,750 lbs. per foot	12	Foot	.2833	3.40
	GATE VALVES Flanged CF80				
	Westcott IBM DD NRS				
	4 in. 700 lbs. T	2	Each	26.8687	53.74
	GATE VALVES Screwed				
	Crane IBM Wedge NRS				
	2 in. 125 lbs. SWP	4	Each	5.0534	20.21
	SPECIAL CONSTRUCTION				
	Railroad Crossings				
	4 in.	60	Foot	2.5346	152.08
	FITTINGS	1	Lot		11.70
	TOTAL LINE M-15				\$ 6,703.28
	<u>LINE M-15-1</u>				
	<u>FROM LINE M-15 TO KENT MIDDLETON REFINERY, NAVARRO COUNTY, TEXAS</u>				
	PIPE Installed in Place				
	Plain End				
	4 in. 10,790 lbs. per foot	1,778	Foot	.5102	\$ 907.14



2571

## TRANSMISSION LINE EQUIPMENT

6483

"M" System

ITEM	QUANTITY	UNIT	UNIT COST	AMOUNT
<u>LINE M-15-1 (Cont'd)</u>				
<u>WELDS</u>				
4 in.	83	Each	1.5350	\$ 127.41
<u>GATE VALVES Flanged CFBO</u>				
Westcott IBEM DD NRS				
4 in. 1200 lbs. OWG WP	1	Each	61.2167	61.22
<u>FITTINGS</u>	1	Lot		10.93
<u>GATE VALVE PITS</u>				
Concrete; complete with cover and lock				
4 ft. 6 in. x 4 ft. 6 in. in plan x 4 ft. deep	1	Each	96.3500	96.35
<u>TOTAL LINE M-15-1</u>				<u>\$ 1,203.05</u>
<u>LINE M-15-2</u>				
<u>FROM LINE M-15 TO HUMBLE OIL AND REFINING COMPANY, POWELL FIELD, NAVARRO COUNTY, TEXAS</u>				
<u>PIPE Installed in Place</u>				
Plain End				
6 in. 18.974 lbs. per foot	11,708	Foot	.8436	\$ 9,876.87
4 in. 10.790 lbs. per foot	2	Foot	.5347	1.07
<u>WELDS</u>				
4 in.	1	Each	2.6473	2.65
<u>COUPLINGS Dresser</u>				
Complete with bolts and rubbers				
6 in.	557	Each	1.9175	1,068.05
<u>GATE VALVES Flanged CFBO</u>				
Walworth IBEM DD OS&Y				
6 in. 700 lbs. T	2	Each	50.9057	101.81
<u>GATE VALVES Screwed</u>				
Walworth IBEM DD OS&Y				
3 in. 700 lbs. T	1	Each	21.8581	21.86
<u>PLUG VALVES Screwed</u>				
Nordstrom				
1 in. 250 lbs. WP	1	Each	5.6640	5.66

2572

Form 254-100M-7-53

## TRANSMISSION LINE EQUIPMENT

"Y" System

6484-6489

eg	ITEM	QUANTITY	UNIT	UNIT COST	AMOUNT
	<u>LINE M-15-2 (Cont'd)</u>				
	SPECIAL CONSTRUCTION				
	Highway Crossings	108	Foot	3.7235	402.14
	6 in.				
	Railroad Crossings	80	Foot	3.7235	297.88
	6 in.				
	FITTINGS	1	Lot		79.73
	GATE VALVE PITS				
	Concrete; complete with cover and lock				
	4 ft. 6 in. x 4 ft. 6 in. in plan x 5 ft. deep	1	Each	113.0300	113.03
	4 ft. 6 in. x 4 ft. 6 in. in plan x 5 ft. deep	1	Each	118.4900	118.49
	TOTAL LINE M-15-2				\$ 12,089.24
	<u>LINE M-16</u>				
	<u>FROM LINE M TO RICHLAND, TEXAS</u>				
	PIPE Installed in Place				
	Threaded and Coupled				
	2 in. 3.750 lbs. per foot	318	Foot	.3462	110.09
	GATE VALVES Flanged CF80				
	Crane IBEH DD 084Y				
	2 in. 700 lbs. T	1	Each	17.2449	17.24
	FITTINGS	1	Lot		5.26
	GATE VALVE PITS				
	Wood; complete with cover and lock				
	3 ft. 3 in. x 3 ft. 3 in. in plan x 4 ft. deep	1	Each	18.5800	18.58
	TOTAL LINE M-16				\$ 151.17

2573

Form 254 10M-6-50

## TRANSMISSION LINE EQUIPMENT

"M" System

6490-6506

ITEM	QUANTITY	UNIT	UNIT COST	AMOUNT
TAP TO HUMBLE OIL AND REFINERY COMPANY METERS, FROM LINE M AT STATION 4225 PLUS 50.5				
PIPE Installed in Place Threaded and Coupled 2 in. 3.750 lbs. per foot	60	Foot	.5698 \$	34.19
GATE VALVES Flanged CF80 Crane IBBM DD CS&Y 2 in. 700 lbs. T	2	Each	17.2449	34.49
FITTINGS	1	Lot		9.98
TOTAL TAP TO HUMBLE OIL AND REFINERY COMPANY				\$ 78.66

2574

Form 284-10-10-2-52

## TRANSMISSION LINE EQUIPMENT

6507-6509

"O" System

ITEM	QUANTITY	UNIT	UNIT COST	AMOUNT
<u>LINE O-1-5</u>				
<u>FROM LINE O-1 TO TRUMBULL,</u>				
<u>ELLIS COUNTY, TEXAS</u>				
PIPE Installed in Place				
Plain End				
3 in. 7.575 lbs. per foot	1,576	Foot	.5912	\$ 931.73
2 in. 3.652 lbs. per foot	2	Foot	.4175	.84
WELDS				
3 in.	73	Each	1.1878	86.71
2 in.	1	Each	1.3597	1.36
GATE VALVES Screwed				
Oil Well Supply Company				
2 in. 700 lbs. T. NRS	1	Each	11.5246	11.52
PLUG VALVES Flanged CPBO				
Merco-Nordstrom				
3 in. 250 lbs. SVP	1	Each	27.1326	27.13
BLOW-OFFS				
Complete with valve & fittings				
2 in.	1	Each	10.8200	10.82
FITTINGS				
	1	Lot		10.96
GATE VALVE PITS				
Cast Iron Curb Box complete with				
Cover and Lock.				
20-1/2 in. diameter x 18 in.	1	Each	6.0200	6.02
Wood complete with Cover & Lock				
4 ft. x 4 ft. in plan x 3 ft. deep.	1	Each	20.7800	20.78
TOTAL LINE O-1-5				\$ 1,107.87
<u>LINE BARRON BRICK COMPANY NO. 1 TAP</u>				
<u>FROM LINE O-1 TO BARRON BRICK</u>				
<u>COMPANY, PLANT NO. 1, ELLIS</u>				
<u>COUNTY, TEXAS</u>				
PIPE Installed in Place				
Plain End				
4 in. 10.790 lbs. per foot	458	Foot	.6126	\$ 280.57

2575

Form 34 10M-68

## TRANSMISSION LINE EQUIPMENT

30" System

6510-6514

ITEM	QUANTITY	UNIT	UNIT COST	AMOUNT
<b>LINE C-2 (Cont'd)</b>				
<b>GATE VALVES Flanged CPBO</b>				
Crane IBBM DD				
4 in. 700 lbs. T. OS&Y	3	Each	32.3367	97.01
2 in. 700 lbs. T. OS&Y	1	Each	17.2449	17.24
<b>GATE VALVES Screwed</b>				
Darling IBBM DD				
4 in. 1000 lbs. T. NRS	1	Each	26.2319	26.23
<b>SPECIAL CONSTRUCTION</b>				
Highway Crossings				
4 in.	44	Foot	2.6622	117.14
Railroad Crossings				
4 in.	27	Foot	2.6622	71.88
<b>BLOW-OFFS</b>				
Complete with Valve & Fittings				
2 in.	1	Each	21.9000	21.90
<b>GAS CLEANER</b>				
18 in. x 10 ft. baseball welded				
ends, three 4 in., one 2 in.,				
four 1 in. and two 3/4 in.				
openings, including valves and				
fittings	1	Each	233.8200	233.82
<b>FITTINGS</b>	1	Lot		60.80
<b>GATE VALVE PITS</b>				
With Cover and Lock				
Cast Iron	2	Each	7.3100	14.62
Concrete with Cover and Lock				
4 ft. 6 in. x 4 ft. 6 in. in				
plan x 6 ft. 2 in. deep.	1	Each	121.9600	121.96
<b>TOTAL LINE C-2</b>				839,621.89
<b>LINE C-2-1</b>				
<b>FROM LINE C-2 TO GARLAND,</b>				
<b>DALLAS COUNTY, TEXAS</b>				
<b>PIPE Installed in Place</b>				
Plain End				
4 in. 10.790 lbs. per foot	1,577	Foot	.5292	834.55

2576

Form 84 10-1-52

## TRANSMISSION LINE EQUIPMENT

6515-6522

\*0\* System

ITEM	QUANTITY	UNIT	UNIT COST	AMOUNT
<u>LINE Q-3-3 (Cont'd)</u>				
GATE VALVES Screwed				
Crane IHBM DD				
2 in. 1000 lbs. T. OS&Y	2	Each	17.0461	34.09
Westcott IHBM DD				
4 in. 500 lbs. OWG WP NRS	1	Each	24.8107	24.81
SPECIAL CONSTRUCTION				
Highway Crossings				
4 in.	78.67	Foot	2.7089	213.11
Railroad Crossings				
4 in.	124.5	Foot	2.8182	350.87
BLOW-OFFS				
Complete with Valves & Fittings				
4 in.	1	Each	39.7000	39.70
FITTINGS	1	Lot		52.14
GATE VALVE PITS				
Concrete with Covers & Locks				
4 ft. 6 in. x 4 ft. 6 in. in				
plan x 3 ft. 10 in. deep	1	Each	91.8600	91.86
4 ft. 6 in. x 4 ft. 6 in. in				
plan x 4 ft. 6 in. deep	1	Each	105.6600	105.66
TOTAL LINE Q-3-3				\$33,745.99
<u>LINE Q-3-4</u>				
FROM LINE Q-3 DALLAS COUNTY TO LEWIS POULTRY COLONY MEASURING STATION, DALLAS COUNTY, TEXAS				
PIPE Installed in Place				
Threaded and Coupled				
2 in. 3.750 lbs. per foot	8	Foot	.5048	4.04
FITTINGS	1	Lot		1.27
TOTAL LINE Q-3-4				\$ 5.31

2577

## TRANSMISSION LINE EQUIPMENT

6523-6610

\*O\* System

ITEM	QUANTITY	UNIT	UNIT COST	AMOUNT
<u>LINE Q-13-2</u>				
<u>FROM LINE Q-13 TO JOSEPHINE, COLLIN COUNTY, TEXAS</u>				
PIPE Installed in Place - Plain End 3 in. 7.575 lbs. per foot	76	Foot	.5602	\$ 50.18
WELDS 3 in.	4	Each	1.2350	4.94
GATE VALVES Flanged CFBO Crane IBBM DD 3 in. 700 lbs. T. OS&Y	1	Each	26.1514	26.15
BLOW-OFFS Complete with valves & fittings 2 in.	1	Each	25.8900	25.89
TOTAL LINE Q-13-2				\$ 107.16
<u>LINE Q-14</u>				
<u>FROM LINE Q TO BUCKNER ORPHANS' HOME, DALLAS COUNTY, TEXAS</u>				
PIPE Installed in Place Plain End 4 in. 10.790 lbs. per foot	20	Foot	.7921	\$ 15.84
FITTINGS	1	Lot		2.65
TOTAL LINE Q-14				\$ 18.49
<u>LINE Q-15</u>				
<u>FROM LINE Q TO URBANDALE, DALLAS COUNTY, TEXAS</u>				
PIPE Installed in Place - Plain End 2 in. 3.652 lbs. per foot	120	Foot	.4487	\$ 53.84
WELDS 2 in.	6	Each	.7767	4.66
TOTAL LINE Q-15				\$ 58.50

2577



## TRANSMISSION LINE EQUIPMENT

Numbered System

6611

Form 254

ITEM	QUANTITY	UNIT	UNIT COST	AMOUNT
<u>LINE 30-A (Cont'd)</u>				
FITTINGS	1	Lot		21.01
GATE VALVE PITS				
Wood; complete with covers and locks				
4 ft. x 4 ft. 4 in. in plan x 4 ft. deep	1	Each	23.5400	23.54
4 ft. 2 in. x 4 ft. 4 in. in plan x 4 ft. deep	1	Each	22.5200	22.52
TOTAL LINE 30-A				\$ 13,642.32
<u>LINE 33</u>				
FROM EASTLAND GAS & ELECTRIC COMPANY TO LINE 174, EASTLAND COUNTY, TEXAS				
PIPE Installed in Place Threaded and Coupled				
6 in. 19,450 lbs. per foot	50	Foot	1.1572	57.86
4 in. 11,000 lbs. per foot	28	Foot	.7266	20.34
GATE VALVES Screwed				
Walworth Wedge Brass N RS				
1 in. 125 lbs. T	1	Each	1.2149	1.21
DRIPS				
Fullerton Type 10 in.	1	Each	224.3700	224.37
FITTINGS	1	Lot		27.95
TOTAL LINE 33				\$ 331.73
<u>LINE 34</u>				
FROM LINE 26, STEPHENS COUNTY TO TEXAS COMPANY WAREHOUSE TAP, EASTLAND COUNTY, TEXAS				
PIPE Installed in Place Threaded and Coupled				
2 in. 3,750 lbs. per foot	16,948	Foot	.2601	\$ 4,408.17

LBB

## TRANSMISSION LINE EQUIPMENT

Numbered System

6612-6620

ITEM	QUANTITY	UNIT	UNIT COST	AMOUNT
<u>LINE 34 (Cont'd)</u>				
<b>GATE VALVES</b> Screwed				
Lunkenheimer Wedge Brass NRS				
2 in. 300 lb. SWP	1	Each	13.2721	13.27
Powell IRBM RS				
2 in. 150 lbs. WP	1	Each	3.7662	3.77
<b>GLOBE VALVES</b> Screwed				
Lunkenheimer				
2 in. 300 lb. SWP Brass	1	Each	10.7045	10.70
2 in. 100 lb. SWP IRBM Clip				
NRS	2	Each	3.5032	7.01
1 in. 200 lb. SWP Brass NRS	2	Each	2.5358	5.07
No Name				
1 in. 200 lb. Brass NRS Std.	1	Each	2.5358	2.54
<b>SPECIAL CONSTRUCTION</b>				
Railroad Crossings				
2 in.	86	Foot	2.2287	191.67
<b>FITTINGS</b>	1	Lot		29.73
<b>TOTAL LINE 34</b>				<u>\$ 4,671.93</u>
<u>LINE 39</u>				
<u>FROM LINE KED TO LINE 234,</u>				
<u>FASTIAND COUNTY, TEXAS</u>				
<b>PIPE</b> Installed in Place				
Threaded and Coupled				
4 in. 11,000 lbs. per foot	3,480	Foot	.6187	2,153.08
<b>GATE VALVES</b> Flanged CF80				
Darling IRBM DD NRS				
4 in. 1600 lbs. T	1	Each	44.1083	44.11
<b>GATE VALVES</b> Screwed				
Darling IRBM DD NRS				
4 in. 1000 lb. T	3	Each	26.2319	78.70
2 in. 1000 lb. T	1	Each	13.1367	13.14
Lunkenheimer Brass Wedge NRS				
2 in. 300 lb. SWP	1	Each	13.2721	13.27
<b>FITTINGS</b>	1	Lot		23.15

## TRANSMISSION LINE EQUIPMENT

6621

## Numbered System

LINE B	ITEM	QUANTITY	UNIT	UNIT COST	AMOUNT
	<u>LINE 110- A (Cont'd)</u>				
	GATE VALVE PITS				
	Wood; complete with cover and lock				
	4 ft. 3 in. x 5 ft. in plan				
	x 5 ft. 2 in. deep	1	Each	37.3700	37.37
	TOTAL LINE 110-A				13,545.18
	<u>LINE 133</u>				
	FROM LINE 45 TO BRECKENRIDGE COUNTRY CLUB, STEPHENS COUNTY, TEXAS				
	PIPE Installed in Place				
	Threaded and Coupled				
	3 in. 7.700 lbs. per foot	20	Foot	.5632	11.26
	2 in. 3.750 lbs. per foot	20,445	Foot	.3794	7,756.83
	REGULATOR				
	Little Hercules 1 in. EH	1	Each	8.3400	8.34
	GATE VALVES Flanged CTFO				
	Ludlow IBBM DD NRS				
	6 in. 1500 lb. T	1	Each	86.2998	86.30
	GATE VALVES Screwed				
	Lunkenheimer Brass Wedge NRS				
	2 in. 300 lb. SWP	4	Each	13.2721	53.09
	No Name Wedge NRS				
	1 in. 250 lb. WP EH	1	Each	4.1561	4.16
	PLUG VALVES Screwed				
	Hordstrom 2 in. 250 lb. WP	1	Each	9.1458	9.15
	SPECIAL CONSTRUCTION				
	Highway Crossings				
	2 in.	32	Foot	1.8728	59.93
	Railroad Crossings				
	2 in.	42	Foot	1.8728	78.66
	FITTINGS				
		1	Lot		36.06
	TOTAL LINE 133				8,103.78

2581

## TRANSMISSION LINE EQUIPMENT

Numbered System

6622-6631

ITEM	QUANTITY	UNIT	UNIT COST	AMOUNT
<u>LINE 140</u>				
FROM LINE 232, TAYLOR COUNTY, TO ABILENE BRICK PLANT, TAYLOR COUNTY, TEXAS				
PIPE Installed in Place Threaded and Coupled				
6 in. 19.450 lbs. per foot	147	Foot	1.0792	158.64
4 in. 11.000 lbs. per foot	7,716	Foot	.6570	5,069.41
CASING Installed in Place 5-3/16 in. 13.000 lbs. per foot	18,864	Foot	.8181	15,432.64
GATE VALVES Flanged CF80 Darling IBSM DD NRS 4 in. 1600 lb. T	1	Each	44.1083	44.11
GATE VALVES Screwed Darling IBSM DD NRS 4 in. 1000 lb. T	3	Each	26.2319	78.70
4 in. 1600 lb. T	1	Each	34.3870	34.39
BLOW-OFFS Complete with valves, and fit- tings 4 in.	1	Each	52.2700	52.27
FITTINGS	1	Lot		104.92
GATE VALVE PITS Concrete; complete with cover and lock 7 ft. x 7 ft. in plan x 3 ft. deep	1	Each	148.8200	148.82
TOTAL LINE 140				\$ 21,123.90
<u>LINE 153</u>				
FROM LINE 87, EASTLAND COUNTY TO C. OWENS WELL NO. 1, EASTLAND COUNTY, TEXAS				
PIPE Installed in Place Threaded and Coupled				
6 in. 19.450 lbs. per foot	107	Foot	1.1104	118.81
4 in. 11.000 lbs. per foot	4,770	Foot	.6889	3,286.05
2 in. 3.750 lbs. per foot	123	Foot	.3394	41.75

2582

Form 224--196M--7-52

## TRANSMISSION LINE EQUIPMENT

6632

## T.P.U. System

ITEM	QUANTITY	UNIT	UNIT COST	AMOUNT
<u>TIFFIN LINE</u> (Cont'd)				
GATE VALVE PITS				
Wood; Complete with covers				
4 ft. 10 in. x 6 ft. 2 in. in plan x 2 ft. deep	1	Each	17.72	17.72
6 ft. 7 in. x 8 ft. 4 in. in plan x 5 ft. 10 in. deep	1	Each	79.75	79.75
Sheet Iron; without cover				
22 in. diam. x 18 in. deep	1	Each	3.12	3.12
22 in. diam. x 17 in. deep	1	Each	3.30	3.30
Sheet Iron; Complete with cover				
22 in. diam. x 18 in. deep	1	Each	7.65	7.65
Steel; Complete with cover				
3 ft. x 3 ft. in plan x 3 ft. deep	1	Each	33.25	33.25
3 ft. x 3 ft. in plan x 3 ft. deep	1	Each	36.35	36.35
3 ft. x 3 ft. in plan x 3 ft. deep	1	Each	32.92	32.92
3 ft. x 3 ft. in plan x 3 ft. deep	1	Each	33.95	33.95
3 ft. x 3 ft. in plan x 3 ft. deep	1	Each	29.87	29.87
3 ft. x 3 ft. in plan x 2 ft. deep	1	Each	25.59	25.59
TOTAL TIFFIN LINE				\$ 58,269.95
<u>ARKANSAS LINE</u>				
FROM CONSOLIDATED LINES TO THE TEXAS ELECTRIC SERVICE COMPANY POWER PLANT				
<u>PIPE Installed in Place</u>				
Plain End				
10 in. 31.445 lbs. per foot	12,417	Foot	1.5283	\$ 18,976.90
Threaded and Coupled				
8-1/4 in. 29.350 lbs. per foot	86	Foot	1.7045	146.59
<u>COUPLINGS Hammond</u>				
Complete with bolts and rubbers				
10 in.	655	Each	3.2868	2,152.85

2583

Form 254--100M--7-53

## TRANSMISSION LINE EQUIPMENT

T. P. U. System

6633-6635

Q8	ITEM	QUANTITY	UNIT	UNIT COST	AMOUNT
	<u>ARKANSAS LINE (Cont'd)</u>				
	GATE VALVES Flanged CFBO				
	Chapman IBBM DD NRS				
	10 in. 125 lbs. SWP No. 59-1/2	1	Each	48.3382	48.34
	Crane IBBM Wedge				
	10 in. 125 lbs. SWP NRS	1	Each	51.0823	51.08
	8 in. 125 lbs. SWP OS&Y	1	Each	43.1506	43.15
	6 in. 125 lbs. SWP NRS	1	Each	20.0617	20.06
	Walworth IBBM				
	8 in. 700 lbs. T. DD OS&Y	1	Each	69.2272	69.23
	8 in. 125 lbs. SWP Wedge OS&Y	1	Each	43.3051	43.31
	6 in. 175 lbs. SWP Wedge NRS	1	Each	20.1235	20.12
	GATE VALVES Screwed				
	Walworth Wedge NRS				
	6 in. 125 lbs. SWP IBBM	1	Each	16.9792	16.98
	1-1/2 in. 125 lbs. SWP Brass	1	Each	2.1923	2.19
	Lunkensheimer King Clip IBBM RS				
	2 in. 150 lbs. SWP	1	Each	3.5032	3.50
	SPECIAL CONSTRUCTION				
	Heater Installation	1	Each	192.2500	192.25
	Dam Crossing - Texas Electric				
	Service Company - Leon Power				
	Plant	844	Foot	4.5187	3,813.78
	GAS CLEANERS				
	Acme 48 in. Serial No. 4866				
	500 lbs. Test Complete with				
	settling tank valves and				
	fittings	1	Each	2201.0300	2,201.03
	FITTINGS	1	Lot		357.55
	TOTAL ARKANSAS LINE				\$ 28,158.91
	<u>CHESLEY 6 IN. LINE</u>				
	FROM CHESLEY 8 IN. LINE, EASTLAND				
	COUNTY, TEXAS TO W.T. 305,				
	EASTLAND COUNTY, TEXAS				
	PIPE Installed in Place				
	Threaded and Coupled				
	6 in. 19.450 lbs. per foot	5,185	Foot	1.2496	\$ 6,479.18

2584

Form 284 1-10-58

## TRANSMISSION LINE EQUIPMENT

6636

T.P.U. System

ITEM	QUANTITY	UNIT	UNIT COST	AMOUNT
<u>CHESLEY 8 IN. LINE (Cont'd)</u>				
GATE VALVE PITS (Cont'd)				
Steel; Complete with cover (Cont'd)				
3 ft. x 3 ft. in plan x 3 ft. deep	2	Each	21.79	43.58
3 ft. x 4 ft. in plan x 3 ft. deep	1	Each	43.85	43.85
3 ft. x 4 ft. in plan x 3 ft. deep	1	Each	43.85	43.85
3 ft. x 4 ft. in plan x 3 ft. deep	1	Each	44.26	44.26
Wood; Complete with cover				
4 ft. 6 in. x 4 ft. 10 in. in plan x 4 ft. 11 in. deep	1	Each	29.83	29.83
TOTAL CHESLEY 8 IN. LINE				\$121,504.11
<u>C &amp; S 107 LINE</u>				
FROM LONE STAR GASOLINE COMPANY PLANT 107 TO TEXAS ELECTRIC SERVICE COMPANY POWER PLANT, EASTLAND COUNTY, TEXAS				
PIPE Installed in Place				
Threaded and Coupled				
8-1/4 in. 28.000 lbs. per foot	33,599	Foot	1.6705	56,127.13
6 in. 19.450 lbs. per foot	11	Foot	1.0967	12.06
4 in. 11.000 lbs. per foot	24	Foot	.6817	16.36
Plain End				
16 in. 47.215 lbs. per foot	283	Foot	2.3430	663.07
8 in. 29.350 lbs. per foot	120	Foot	1.6553	198.64
8 in. 27.062 lbs. per foot	16	Foot	1.1465	18.34
6 in. 18.974 lbs. per foot	22	Foot	.8857	19.49
WELDS				
16 in.	15	Each	5.7234	85.85
8 in.	6	Each	2.8752	17.25
6 in.	1	Each	4.0092	4.01
GATE VALVES Flanged CF80				
Chapman IBBM DD NRS				
8 in. 150 lbs. OWG WF No. 59-1/2	2	Each	34.6789	69.36
Crane IBBM				
6 in. 700 lbs. T. DD OS&Y	3	Each	50.6997	152.10
4 in. 125 lbs. SWP Wedge NRS	2	Each	14.9334	29.87
Darling IBBM DD NRS				
6 in. 1600 lbs. T. No. 162	1	Each	84.6795	84.68



2585

## TRANSMISSION LINE EQUIPMENT

T.P.U. System

6637

ITEM	QUANTITY	UNIT	UNIT COST	AMOUNT
<b>C &amp; S 107 LINE (Cont'd)</b>				
<b>GATE VALVES Flanged CF80 (Cont'd)</b>				
Ludlow IREM DD NRS				
8 in. 1000 lbs. T No. 30	1	Each	79.8068	79.81
Ohio Injector Co. IREM Wedge NRS				
8 in. 125 lb. SWP	2	Each	36.5902	73.18
4 in. 125 lb. SWP	1	Each	15.0338	15.03
Walworth IREM DD OS&Y				
8 in. 700 lbs. T	1	Each	77.0178	77.02
Westcott IREM Wedge NRS				
8 in. 125 lbs. OWG WP	3	Each	36.1892	108.57
<b>GATE VALVES Screwed</b>				
Crane IREM Wedge NRS				
8 in. 125 lbs. SWP	1	Each	28.1124	28.11
6 in. 125 lbs. SWP	1	Each	16.9257	16.93
2 in. 125 lbs. SWP	3	Each	5.0534	15.16
Hancock Brass Wedge RS				
1/4 in. Standard	1	Each	11.5866	11.59
Jarecki IREM DD NRS				
2 in. Standard	1	Each	11.8084	11.81
Jarecki U Clamp IREM Wedge RS				
2 in. 125 lbs. SWP	1	Each	2.8281	2.83
Lunkenheimer Clip IREM Wedge RS				
2 in. 100 lbs. SWP	2	Each	3.5032	7.01
Walworth Wedge NRS				
8 in. 125 lbs. SWP IREM	1	Each	28.3134	28.31
4 in. 125 lbs. SWP IREM	1	Each	9.9362	9.94
1/4 in. 125 lbs. SWP Brass	2	Each	.5848	1.17
Powell Brass Wedge NRS				
1/4 in. 125 lbs. SWP	1	Each	.9531	.95
No Name IREM Wedge NRS				
2 in. Standard	1	Each	5.0534	5.05
<b>SPECIAL CONSTRUCTION</b>				
Highway Crossing				
8-1/4 in.	25	Foot	3.1422	78.56
Railroad Crossing				
8-1/4 in.	60	Foot	3.0097	180.58
Pipe Heater				
Complete with valves, fittings and meter				
18 in. x 9 ft.	1	Each	129.9000	129.90
Colony Creek Crossing				
8-1/4 in.	135	Foot	3.0184	407.48
Regulator Pit (Open)				
8 ft. x 19 ft. 3 in. in plan x 3 ft. 3 in. deep	1	Each	39.5500	39.55

2586

Form 24-10M-2-5

## TRANSMISSION LINE EQUIPMENT

6638

## T.P.U. System

ITEM	QUANTITY	UNIT	UNIT COST	AMOUNT
<u>C &amp; S 107 LINE</u> (Cont'd)				
DRIPS				
Screw Type 8-1/4 in.	1	Each	161.04	161.04
Welded Type 10 in.	1	Each	149.10	149.10
FITTINGS	1	Lot		938.29
GATE VALVE PITS				
Wood: Complete with cover.				
4 ft. 6 in. x 4 ft. 7 in. in plan x 3 ft. 10 in. deep	1	Each	18.32	18.32
4 ft. 6 in. x 5 ft. in plan x 4 ft. 10 in. deep	1	Each	32.36	32.36
TOTAL C & S 107 LINE				\$ 60,125.86
<u>C &amp; S 108 LINE</u>				
<u>FROM PLANT 108 TO C &amp; S 107 LINE</u>				
PIPE Installed in Place				
Threaded and Coupled				
8-1/4 in. 28,000 lbs. per foot	12,350	Foot	1.6393	\$ 20,245.36
GATE VALVES Flanged CF80				
Chapman IRRM DD NRS				
8 in. 150 lbs. OWG WP No. 59-1/2	1	Each	34.6789	34.68
Walworth IRRM Wedge NRS				
8 in. 125 lbs. SWP	1	Each	36.2304	36.23
4 in. 125 lbs. SWP	1	Each	15.0261	15.03
Westcott IRRM Wedge NRS				
8 in. 125 lbs. SWP	1	Each	36.1892	36.19
GATE VALVES Screwed				
Crane IRRM Wedge NRS				
8 in. 125 lbs. SWP	2	Each	28.1124	56.22
Powell White Star Brass DD RS				
1-1/2 in. 150 lbs. SWP	1	Each	4.5233	4.52
CHECK VALVES Screwed				
Beckwith Swing 8 in. CI EH	1	Each	52.8609	52.86
DRIPS				
Screw Type 12-1/2 in.	1	Each	282.87	282.87
12-1/2 in.	1	Each	375.56	375.56
12-1/2 in.	1	Each	244.64	244.64
12-1/2 in.	1	Each	273.31	273.31
Welded Type 20 in.	1	Each	145.69	145.69

2587

## TRANSMISSION LINE EQUIPMENT

6639

T.P.U. System

Form No. 12M-62

ITEM	QUANTITY	UNIT	UNIT COST	AMOUNT
<u>C &amp; S 108 LINE</u> (Cont'd)				
FITTINGS	1	Lot		\$ 85.06
TOTAL C & S 108 LINE				\$ 21,886.22
<u>C &amp; S 109 LINE</u>				
FROM LONE STAR GASOLINE COMPANY PLANT 109 TO TEXAS ELECTRIC SERVICE COMPANY LEON PLANT, EASTLAND COUNTY, TEXAS				
PIPE Installed in Place				
Threaded and Coupled				
12-1/2 in. 45.000 lbs. per foot	549	Foot	3.0496	\$ 1,674.23
10 in. 37.750 lbs. per foot	10	Foot	2.3525	23.53
8-1/4 in. 36.000 lbs. per foot	28,747	Foot	2.4088	69,245.77
Plain End				
16 in. 47.215 lbs. per foot	218	Foot	2.6252	572.29
8 in. 25.062 lbs. per foot	5	Foot	1.4281	7.14
WELDS				
16 in.	12	Each	5.4955	65.95
8 in.	1	Each	5.3507	5.35
PIPE Above Ground				
Threaded and Coupled				
8-1/4 in. 28.000 lbs. per foot	645	Foot	1.3636	879.52
GATE VALVES Flanged CF80				
Darling IREM DD NRS				
8 in. 100Q lbs. T.	5	Each	76.3652	381.83
Westcott IREM Wedge NRS				
4 in. 175 lbs. OWG WP	1	Each	14.7120	14.71
GATE VALVES Screwed				
Crane Brass Wedge NRS				
2 in. 125 lbs. SWP	2	Each	3.3369	6.67
Lunkenheimer Clip RS				
2 in. 100 lbs. SWP	1	Each	3.5032	3.50
Lunkenheimer Brass DD RS				
1 in. 150 lbs. SWP	1	Each	2.2433	2.24
Powell White Star Brass Wedge RS				
1/4 in. 200 lbs. SWP	1	Each	1.1109	1.11
Walworth Brass Wedge NRS				
2 in. 125 lbs. SWP	1	Each	3.1961	3.20

2588

Form 34-10M-2-53

## TRANSMISSION LINE EQUIPMENT

T.P.U. System

6640-6641

ITEM	QUANTITY	UNIT	UNIT COST	AMOUNT
<b>C &amp; S 109 LINE (Cont'd)</b>				
<b>SAFETY VALVES Flanged CF80</b>				
Lunkensheimer Non-Return IBEM				
OS&Y				
6 in. 250 lb. SWP	1	Each	144.5713	144.57
<b>SPECIAL CONSTRUCTION</b>				
By-Pass to Scrubber at Plant 109				
4 in.	1	Each	58.4900	58.49
Highway Crossing				
8-1/4 in.	70	Foot	3.1173	218.21
Railroad Crossing				
8-1/4 in.	373	Foot	3.3089	1,234.22
Stream Crossing				
8-1/4 in.	75	Foot	3.1589	236.92
8-1/4 in.	128	Foot	3.0599	391.67
Pipe Heater, Brick, complete				
with cover and stack	1	Each	64.0500	64.05
<b>IRIPS</b>				
Screw Type				
8-1/4 in.	1	Each	77.7000	77.70
8-1/4 in.	1	Each	76.8900	76.89
8-1/4 in.	1	Each	77.8100	77.81
8-1/4 in.	1	Each	78.4600	78.46
8-1/4 in.	1	Each	79.1700	79.17
8-1/4 in.	1	Each	106.9300	106.93
Welded Type				
8-1/4 in.	1	Each	124.4500	124.45
<b>FITTINGS</b>	1	Lot		258.02
<b>GATE VALVE PITS</b>				
Wood; with cover				
5 ft. 3 in. x 5 ft. 3 in. in				
plan x 5 ft. deep	1	Each	43.1800	43.18
Concrete; without cover				
6 ft. x 6 ft. 3 in. in plan x				
4 ft. 9 in. deep	1	Each	110.7300	110.73
<b>TOTAL C &amp; S 109 LINE</b>				\$ 76,268.51
<b>CONSOLIDATED NO. 1 LINE</b>				
<b>FROM CONSOLIDATED PLANT TO</b>				
<b>ARKANSAS 10 IN. LINE</b>				
<b>PIPE Installed in Place</b>				
Threaded and Coupled				
8-1/4 in. 28.00 lbs. per foot	12,070	Foot	1.7596	\$ 21,238.37

## TRANSMISSION LINE EQUIPMENT

6642

T.P.U. System

ITEM	QUANTITY	UNIT	UNIT COST	AMOUNT
<u>CONSOLIDATED NO. 2 LINE (Cont'd)</u>				
FITTINGS	1	Lot		25.73
TOTAL CONSOLIDATED NO. 2 LINE				22,403.54
<u>OAKLAND 6 IN. LINE</u>				
<u>FROM STRAWS LINE TO OAKLAND FIELD</u>				
PIPE Installed in Place Threaded and Coupled				
8 in. 29.350 lbs. per foot	5	Foot	1.6977	8.49
6 in. 19.450 lbs. per foot	14,416	Foot	1.1410	16,448.66
3 in. 7.700 lbs. per foot	727	Foot	.5271	383.20
GATE VALVES Screwed				
Westcott IREM DD NRS				
8 in. 800 lb. OWG WP	1	Each	102.6617	102.66
Westcott IREM DD NRS				
2 in. 1200 lb. OWG WP	1	Each	19.4032	19.40
CHECK VALVES Screwed				
Backwith Swing				
3 in. 250 lb. WP	1	Each	6.9252	6.93
FITTINGS	1	Lot		68.45
GATE VALVE PITS				
Wood; with cover				
4 ft. x 4 ft. in plan x 3 ft. deep	1	Each	13.6700	13.67
2 ft. x 2 ft. in plan x 4 ft. deep	1	Each	8.3900	8.39
TOTAL OAKLAND 6 IN. LINE				17,059.85
<u>SIRLEY LINE</u>				
<u>FROM STRAWN LINE TO T.R.S.Co.</u>				
<u>POWER-PLANT, EASTLAND COUNTY,</u>				
<u>TEXAS</u>				
PIPE Installed in Place Threaded and Coupled				
10 in. 40.000 lbs. per foot	26,185	Foot	2.5214	66,022.86
8-1/4 in. 28.000 lbs. per foot	898	Foot	1.5408	1,383.64
8 in. 29.350 lbs. per foot	371	Foot	1.5244	565.55

2590

Form 254-10M-5-52

Form 254

## TRANSMISSION LINE EQUIPMENT

T.P.U. System

6643

ITEM	QUANTITY	UNIT	UNIT COST	AMOUNT
<b>SIRLEY LINE (Cont'd)</b>				
PIPE (Above Ground)				
Threaded and Coupled				
8-1/4 in. 28,000 lbs. per foot	1,262	Foot	1.3636	1,720.86
<b>GATE VALVES Flanged CYBO</b>				
Chapman IHBM Wedge OS&Y				
10 in. 250 lb. OWB WP No. 42	1	Each	102.7431	102.74
Chapman IHBM ID OS&Y				
8 in. 150 lb. OWG WP				
No. 59-1/2	1	Each	45.7228	45.72
Crane IHBM Wedge OS&Y				
10 in. 250 lb. SWP	1	Each	159.9515	159.95
Westcott IHBM ID OS&Y				
10 in. 800 lb. OWG WP	1	Each	276.9571	276.96
Westcott IHBM Wedge Y RS				
8 in. 125 lb. SWP	1	Each	36.1892	36.19
<b>GATE VALVES Screwed</b>				
Fairbanks IHBM Wedge MRS				
4 in. 125 lb. SWP	1	Each	9.1122	9.11
Lunkenheimer Clip Wedge RS				
2 in. 100 lb. SWP	2	Each	3.5032	7.01
Walworth Kay ID RS				
2 in. 125 lb. SWP	2	Each	3.0077	6.02
Stop Cock Screwed				
3/8 in. IBBC Std.	1	Each	.3332	.33
<b>SPECIAL CONSTRUCTION</b>				
Creek Crossing				
10 in.	172	Foot	2.6286	452.12
10 in.	75	Foot	2.6003	195.02
Leon River Crossing No. 1				
10 in.	230	Foot	4.6281	1,064.46
Leon River Crossing No. 2				
10 in.	644	Foot	2.7532	1,773.06
<b>IRIPS</b>				
Welded Type				
10 in.	1	Each	109.9300	109.93
10 in.	1	Each	123.9900	123.99
10 in.	1	Each	127.8600	127.86
10 in.	1	Each	142.1100	142.11
10 in.	1	Each	133.7900	133.79
10 in.	1	Each	160.6600	160.66
10 in.	1	Each	140.8600	140.86
10 in.	1	Each	161.1900	161.19
10 in.	1	Each	151.0000	151.00
10 in.	1	Each	121.2900	121.29

2591

## TRANSMISSION LINE EQUIPMENT

T.P.U. System

6644-6659

ITEM	QUANTITY	UNIT	UNIT COST	AMOUNT
<b><u>SIBLEY LINE</u></b> (Cont'd)				
<b><u>DRIPS</u></b> (Cont'd)				
Welded Type				
10 in.	1	Each	111.6900	111.69
12-1/2 in.	1	Each	275.3000	275.30
12-1/2 in.	1	Each	148.2400	148.24
<b><u>FITTINGS</u></b>	1	Lot		562.77
<b><u>GATE VALVE FITS</u></b>				
Wood; with cover				
4 ft. x 4 ft. in plan x 3 ft.	1	Each	14.7300	14.73
2 in. deep				
<b>TOTAL SIBLEY LINE</b>				\$ 76,307.01
<b><u>STRAWN LINE</u></b>				
<b><u>FROM SIBLEY LINE, EASTLAND COUNTY</u></b>				
<b><u>TEXAS TO STRAWN, PALO PINTO,</u></b>				
<b><u>COUNTY, TEXAS</u></b>				
<b><u>PIPE</u></b> Installed in Place				
Threaded and Coupled				
10 in. 40.000 lbs. per foot	8,638	Foot	2.5946	22,412.15
8 in. 29.000 lbs. per foot	86,705	Foot	1.7152	148,716.42
Plain End				
10 in. 31.445 lbs. per foot	267	Foot	1.6630	444.02
<b><u>WELDS</u></b>				
10 in.	14	Each	3.7906	53.07
<b><u>GATE VALVES</u></b> Flanged CF80				
Chapman IHBM DD NRS				
8 in. 800 lb. OWG WP No.106	1	Each	127.4867	127.49
Westcott IHBM DD NRS				
10 in. 800 lb. OWG WP	1	Each	231.7833	231.78
Western Tube Company 10 in.				
250 lb. WP NRS, with by-pass				
consisting of 1 2 in. Crane				
Flanged Gate Valve IHBM				
Wedge NRS 250 lb. SWP, and				
2 2 in. 90 degree flanged				
Ells CI EH	1	Each	175.7888	175.79



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**PAGE**

## Reproduction Cost—New

Station	Land	Leaseholds	Structures	Equipment	Total
Alvord.....	.....	\$1,066.23	\$868.59	\$12,569.86	\$14,504.68
Brad.....	.....	7,273.29	19,484.86	135,434.59	162,192.74
Brazos.....	.....	.....	15,578.18	70,642.09	89,622.32
Breckenridge.....	\$3,402.05	.....	29,986.67	255,539.23	290,099.28
Caddo.....	4,573.38	.....	32,290.31	221,714.18	261,986.25
Cheaney.....	7,981.76	.....	23,021.17	110,652.64	137,093.05
Desdemona.....	3,419.24	.....	14,341.27	59,929.93	77,229.85
Eastland.....	2,958.65	.....	15,956.49	112,320.95	130,994.31
Fox Central.....	2,716.87	8,948.29	48,819.80	186,518.26	244,286.35
Fox East.....	3,808.26	.....	12,610.39	84,797.23	101,215.88
Gainesville.....	4,222.23	.....	10,733.15	61,339.90	76,295.28
Gas City.....	8,446.82	.....	32,234.15	240,942.37	281,623.34
Ibex.....	.....	9,625.81	33,488.78	206,016.13	249,130.72
Joshua No. 1.....	4,812.80	.....	34,138.62	402,109.51	441,055.93
Joshua No. 2.....	.....	.....	5,994.35	63,608.04	69,602.39
Loco.....	3,912.62	.....	17,543.50	115,248.99	136,705.11
Petrolia.....	17,146.10	3,071.51	199,051.76	\$37,369.04	1,056,638.41
Pueblo.....	2,482.47	.....	12,978.58	71,906.60	87,367.65
Ranger No. 1.....	4,181.83	.....	20,371.28	104,302.45	128,855.56
Ranger No. 2.....	2,903.45	.....	17,003.12	93,098.39	113,004.96
Ranger No. 3.....	5,642.76	.....	46,754.72	239,253.44	291,650.92
Ranger No. 4.....	4,894.89	.....	20,982.49	140,026.82	165,904.20
Sipe Springs.....	5,022.84	.....	31,728.47	145,824.89	182,576.20
Tiffin.....	1,967.80	.....	7,893.52	41,205.39	51,066.71
X-Ray.....	2,052.27	.....	14,207.09	52,980.80	69,240.16
Grand Total.....	\$96,549.09	\$29,985.13	\$718,056.31	\$4,065,351.72	\$4,909,942.25

## Defendant's Exhibit No. 28—Continued

[fols. 7714-7715] Lone Star Gas Company

## General Office Land

Amount

General Office Building Site, Dallas,  
Texas:

80 x 90 ft. located at Wood and Harwood Streets, Dallas, Dallas County, Texas; being a part of Block 98½ according to official map of said city and described as follows:

Beginning at the intersection of the north line of Wood Street 90 feet; thence, in a northerly direction, parallel with the west line of Harwood Street 80 feet; thence, in an easterly direction parallel with the north line of Wood Street, 90 feet to a point in the west line of Harwood Street; thence, in a southerly direction along said line of Harwood Street 80 feet to the place of beginning; being a part of the same land conveyed to Harwood Realty Company by Lon Hudson and wife, Gladys W. Hudson, by deed dated May 3, 1913, recorded in Volume 583, Page 23, of the Deed Records of Dallas County, Texas ..... \$44,545.00

[fol. 7716]

Lone Star Gas Company

## Other General Land

Lot Adjoining General Office Building Site, Dallas, Dallas County, Texas:

Amount

Lot on Wood Street, 70 x 80 feet, out of Block 98½, City of Dallas, described as follows:

Beginning at a point in the north line of Wood Street, 90 feet in a westerly direction from the intersection of said north line of Wood Street with the west line of Harwood; thence, along said north line of Wood Street in a westerly direction 70 feet; thence, at right angles and parallel with said west line of Harwood Street

## Defendant's Exhibit No. 28—Continued

	Amount
80 feet in a northerly direction; thence, at right angles, and parallel with said north line of Wood Street in an easterly direction 70 feet; thence, at right angles and parallel with said west line of Harwood Street 80 feet to the place of beginning	\$18,052.00
General Shop, Logan Street, Dallas, Dallas County, Texas:	
Part of Block 866, being all of that part of two parcels conveyed to Peaslee-Gaulbert Company lying northwest of the northwest line of Logan Street extended to Myrtle Street, size 150 x 229 feet, more or less; containing approximately 34,350 sq. ft.	\$11,500.00
All of Lots 1, 13 and 14 of J. B. Cranfill's second amended subdivision, Block 866 of City of Dallas, size 150 x 140 ft.; containing approximately 21,000 sq. ft.	5,355.00
All of Lot 2 of J. B. Cranfill's second subdivision, Block 866 of City of Dallas, size 50 x 140 ft.; containing approximately 7,000 sq. ft.	2,500.00
[fols. 7717-7718] All of Lot 3 of J. B. Cranfill's second subdivision, Block 866 of City of Dallas, size 50 x 140 ft.; containing approximately 7,000 sq. ft.	\$4,000.00
All of Lot 15 of J. B. Cranfill's second amended subdivision, Block 866, of City of Dallas, size 140 x 50 ft.; containing approximately 7,000 sq. ft.	2,750.00
Total Original Cost	\$26,105.00
Improvements:	
Spur Track	\$896.73
Sidewalks and driveways	2,598.85
Paving	605.46
Fence	1,015.83
	5,116.87
Total General Shop	\$31,221.87
Total Other General Land	\$49,273.87

## Defendant's Exhibit No. 28—Continued

[fol. 7719]

Lone Star Gas Company

## General Office Structure

Amount

## General Office Building, Dallas, Texas:

Location: Northwest corner of Harwood and  
Wood Streets, Block 98½, Dallas, Texas.

Size: 81 ft. x 90 ft., 10 stories with full base-  
ment entire area

## Exterior Finish:

Street Elevations: Leuder's cut stone  
first story, face brick and terra cotta  
facing above

Rear Elevations: Common brick facing,  
painted

## Structural Frame:

Foundation: 3000-lb. pre-casted concrete  
piling to rock, approximately 32 ft. 0  
in. below street level

General Structure: reinforced concrete,  
joist construction

## Interior Finish:

Floors: ½ in. cement topping through-  
out; linoleum and rubber tile in offices  
and corridors over cement topping;  
tile in toilet rooms and ground floor  
elevator lobby

Millwork: All doors, windows on street  
elevations, base and picture mould of  
quartered-sawed white oak

Partitions: Masonry around all shafts  
and toilets; 2 in. metal lath and plas-  
ter elsewhere

Ceilings: Metal lath and plaster at-  
tached to concrete joists

Painting: Wood work, five coats, filler  
and varnish; walls and ceilings, four  
coat standard wall finish

Marble: Wainscot on Ninth Floor corri-  
dors, wainscot toilets and elevator  
lobbys; base other corridors

## Defendant's Exhibit No. 28—Continued

	Amount
Hardware: Corbin hardware throughout . . . . .	
[fols. 7720-7721] Toilets: Marble wainscot partitions, tile floor . . . . .	
Metal Windows: On two rear elevations and in court . . . . .	
Roofing and Sheet Metal: All sheet metal copper, twenty year guarantee; tar and gravel roof . . . . .	
Elevators: Two high speed American type passenger elevators . . . . .	
Glass: Plate glass on two street sides; wire glass on two rear sides; obscure glass in all interior doors, transoms and sidelights . . . . .	
Plumbing: 134 enameled iron standard fixtures, flush valves, circulating ice water each floor above first floor . . . . .	
Heating: 2 gas fired welded steel boilers, 1 high pressure steam boiler, 3,620 square feet Peerless cast iron radiators on first four floors, 5,621 square feet of Corto cast iron radiators on upper floors . . . . .	
Total Reproduction Cost—New . . . . .	\$321,437.63

2598

(Here follow four photolithographs, side folios 7722, 7723-  
7762, 7763-7769 and 7770-7771)



2598A

## LONE STAR GAS COMPANY

7722

## Other General Structures

ITEM	QUANTITY	UNIT	UNIT COST	AMOUNT
<b>GENERAL SHOP</b> Logan Street, Dallas, Dallas County, Texas				
<u>Warehouse, Garage and Machine Shop Building:</u> 112 x 180 ft. in plan; concrete foundation, reinforced concrete and wood block on reinforced concrete floors, steel columns and roof trusses, 13 in. brick walls, composition roofing on wood sheathing, steel monitors and skylights.				
Building includes electric lighting and power wiring, plumbing and fixtures, Grinnell sprinkler system, interior fire doors, concrete loading platform 8 x 116 ft., air, gas, drainage and water lines and heating system				
	1	Bldg.	39,247.90	\$39,247.90
<u>Shop Addition:</u> 30 x 100 ft. in plan; 4 - 10 ft. bays, 18 ft. to eaves and 23 ft. to peak; 6 - 10 ft. bays, 12 ft. to eaves and 17 ft. to peak; concrete foundation and floor, steel frame and roof trusses, galvanized iron siding and roof; painted inside and outside; electric wiring, plumbing and fixtures				
	1	Bldg.	6,726.89	6,726.89
<u>Steel Storehouse:</u> 12 x 24 ft. in plan; 8 ft. to eaves, 2 ft. 8 in. pitched roof; concrete foundation and floor, steel frame and trusses, galvanized iron siding and roof; painted inside and outside				
	1	Bldg.	53.99	53.99

2598B

Form 28-1 100M 7-43

## Other General Structures

7723-7762

ITEM	QUANTITY	UNIT	UNIT COST	AMOUNT
<b>GENERAL SHOP</b> <b>Logan Street, Dallas, Dallas</b> <b>County, Texas (Cont'd)</b>				
<u>Pipe Racks</u> Constructed of 6 in. pipe and set on concrete piers	1	Each	300.78	300.78
TOTAL REPRODUCTION COST - NEW				\$46,789.56

2598C

## GENERAL OFFICE FURNITURE AND FIXTURES

7763-7769

ITEM	QUANTITY	UNIT	UNIT COST	AMOUNT
<b>MISCELLANEOUS (Cont'd)</b>				
Scheaffer's Pen Medium Point No. TH-74-DH	1	Each	6.40	\$ 6.40
Scheaffer's Fountain Pen	1	Each	8.00	8.00
Fountain Pen Set Fine Point No. 107	1	Each	24.00	24.00
Fountain Pen Set Medium Point No. 816	1	Each	10.20	10.20
Fountain Pen Set Fine Flexible Point No. 818	1	Each	12.00	12.00
<b>Desk Pads</b>				
No. 276-2	1	Each	28.13	28.13
No. 279	1	Each	15.00	15.00
No. 1113	1	Each	10.88	10.88
No. 1108	2	Each	13.50	27.00
No. 407	1	Each	4.88	4.88
No. 277	1	Each	13.50	13.50
Special	1	Each	4.13	4.13
<b>Law Library</b>	1	Lot	9,604.52	9,604.52
<b>TOTAL REPRODUCTION COST - NEW -</b>				<b>\$207,601.84</b>

259810

Form 254-100M-7-52

## OTHER GENERAL FURNITURE AND FIXTURES

7770-7771

B	ITEM	QUANTITY	UNIT	UNIT COST	AMOUNT
	<b>MISCELLANEOUS (Cont'd)</b>				
	Typewriter Stand with folding leaf 27 x 14 in.	1	Each	12.50	12.50
	General Electric Oscillating Fans 12 in.	3	Each	18.00	54.00
	16 in.	1	Each	21.00	21.00
	No. A00 M-10294 12 in.	1	Each	18.00	18.00
	Westinghouse Electric Oscillating Fan 12 in.	1	Each	18.00	18.00
	Hunter Oscillating Fan 12 in.	2	Each	18.00	36.00
	Hunter Ceiling Fans	5	Each	30.00	150.00
	Columbian Postal Scales 2-1/2 lbs.	7	Each	2.30	16.10
	Hanson Postal Scales 5 lbs.	1	Each	4.60	4.60
	National Postal Scales 4 lbs.	1	Each	3.10	3.10
	Ceiling Fan DC	1	Each	30.00	30.00
	National Safety Chest No. S04	1	Each	63.75	63.75
	Bostitch Staplers	3	Each	3.05	9.15
	Costumers Home-made	2	Each	9.36	18.72
	Marvel No. 60 Punch	4	Each	1.65	6.60
	Jones Paper Punch	1	Each	2.00	2.00
	Letter Trays ,Wire, Single	29	Each	.30	8.70
	Letter Trays ,Wire, Double	5	Each	.30	1.50
	Cuspidors Enamelled Steel	11	Each	1.04	11.44
	Waste Paper Baskets Wire	11	Each	.35	3.85
	Waste Paper Baskets				
	Vul-Cot 8-12 x 14 in.	1	Each	2.00	2.00
	Wire 12-16 x 18 in.	1	Each	.97	.97
	Dexter Pencil Sharpeners	2	Each	3.86	7.72
	Junior Pencil Sharpeners	6	Each	2.79	16.74
	Boston Pencil Sharpeners	1	Each	1.50	1.50
	Economy Pencil Sharpeners	1	Each	1.50	1.50
	Giant Pencil Sharpeners	1	Each	1.50	1.50
	Leather Brief Cases 3-pocket	22	Each	7.50	165.00
	Ink Wells single	1	Each	2.14	2.14
	Ink Wells double	2	Each	3.44	6.88
	Puritan Drinking Cup Holder	1	Each	.96	.96
	Universal Desk Lamp Brass	2	Each	3.75	7.50
	Beth Thomas 8-day Clock Brass	1	Each	9.75	9.75
	Garbage Can C.G.I. 24 x 28 in.	1	Each	4.25	4.25
	<b>TOTAL REPRODUCTION COST - NEW</b>				<b>\$12,059.97</b>

## Defendant's Exhibit No. 28—Continued

[fols. 7772-7787] Lone Star Gas Company

## General Shop Equipment

Item	Recapitulation	Reproduction Cost—New
Machinery and Equipment.....		\$57,658.03
Meter Testing Equipment and Supplies.....		40,860.02
Other General Shop Equipment.....		5,482.22
Total .....		\$104,000.27

[fols. 7788-7789] Lone Star Gas Company

## General Tools

Department	Reproduction Cost—New
Compressing .....	\$32,935.84
Gas Measurement .....	10,215.28
General Shop .....	26,992.72
Meter Shop .....	895.11
Pipe Line .....	58,558.42
Production .....	377.14
Storehouse .....	10.61
Telephone .....	1,564.60
Total .....	\$131,549.72

[fols. 7790-7811] Lone Star Gas Company

## Automotive and Construction Equipment

Kind of Equipment	Recapitulation	Reproduction Cost—New
Automobiles .....		\$170,797.67
Trucks .....		106,021.97
Trailers .....		16,519.21
Tractors .....		59,935.00
Air Compressors .....		23,090.41
Ditching Machines .....		40,739.16
Backfillers .....		6,614.40
Grand Total .....		\$423,717.82

## Defendant's Exhibit No. 28—Continued

[fol. 7812] Lone Star Gas Company  
General Telephone System  
Summary

Line	Reproduction Cost—New
Petrolia to Shamrock.....	\$64,545.43
Tap to Hollis Gasoline Plant.....	104.77
Tap to Shamrock.....	421.65
Tap from "A" Telephone Line to Vernon Warehouse.....	101.59
Petrolia to Fort Worth.....	29,670.09
B-2 to Bowie.....	1,287.34
B-5 to Decatur.....	802.13
Dallas to Fort Worth.....	12,797.15
North Ft. Worth to Fort Worth Office.....	470.18
Irving to Gainesville.....	19,995.83
Gainesville Junction to Gainesville.....	114.00
Dixie Junction to Loco Compressor Station.....	2,030.09
Tap to Loco.....	602.31
Dixie Junction to Pernell.....	6,642.01
From East to Central Compressor Station.....	247.10
Dixie Junction to Gainesville.....	18,062.98
Petrolia to Clarkson.....	13,038.58
Petrolia Tap.....	475.12
Tap to Petrolia Loading Rack.....	308.26
Local Clarkson to Temple.....	1,236.65
Clarkson to Farwell Warehouse.....	6,447.63
J. C. Junction to Joshua.....	9,531.16
Tap to South Fort Worth.....	366.47
Tap to H. C. Hogue.....	167.18
Tap to Handley.....	566.54
Gordon to Ibex and Plant No. 3.....	20,683.74
Tap to Tiffin Gasoline Plant.....	1,277.02
K. B. Junction to Sipe Springs.....	11,925.11
Tap to Ranger Plant No. 1.....	114.24
Tap to Ranger Plant No. 2.....	302.45
K. A. Junction to Mineral Wells Field.....	6,646.96
Tap to Cheaney Compressor Station.....	2,677.19
Ranger Plant No. 3 to Pueblo Gasoline Plant.....	5,989.26
Tap to Pueblo Loading Rack.....	625.95
Gordon to X-Ray.....	2,534.85
Plant 108 to Plant No. 3.....	115.79

## Defendant's Exhibit No. 28—Continued

Line	Reproduction Cost—New
Line to Plant 101 and Offices .....	\$1,221.98
Line to Plant 103 .....	93.70
From Plant No. 3 to Ranger .....	316.42
Ranger Plant No. 3 to Eastland Compressor Sta. ....	1,039.66
Plant 109 to Plant 109-A .....	1,222.07
Gordon Gasoline Plant to Gordon .....	150.20
Dallas to Joshua and Gordon to K. & O. Junc- tion .....	27,901.09
Tap to Second Avenue, Dallas .....	1,369.05
Joshua to Gordon .....	26,538.36
[fols. 7813-7852] Tap to Brad Compressor Station .....	2,206.14
Tap to Warren Lease .....	611.45
Tap to Caddo Compressor Station .....	764.76
Tap to Breckenridge Compressor Station .....	300.80
Joshua to L. & M. Junction .....	2,305.12
Tap to Strawn, Texas .....	1,261.52
Total .....	<u>\$310,227.12</u>
General Supervision—Allocated .....	<u>\$60,237.00</u>
Total General Telephone System .....	<u>\$370,464.12</u>

[fols. 7853-7856]

## Lone Star Gas Company

## Final Engineering Records

## Second Year:

General Payroll and Traveling Expenses .....	\$136,320.00	
Office and Field Equipment, Supplies and Ex- penses .....	11,231.00	
Field Payroll and Expenses .....	<u>198,751.15</u>	\$346,302.15

## Third Year:

General Payroll and Traveling Expenses .....	88,659.60	
Office and Field Equipment, Supplies and Ex- penses .....	7,991.59	
Field Payroll and Expenses .....	<u>156,484.80</u>	253,135.99

## Fourth Year:

General Payroll and Traveling Expenses .....	68,307.00	
Office and Field Equipment, Supplies and Ex- penses .....	9,389.71	
Field Payroll and Expenses .....	<u>88,555.50</u>	166,252.21

Total—Final Engineering Records .....

	<u>\$765,690.35</u>
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[fols. 7857-7866] Lone Star Gas Company

### Appraisal

Cost of Reproduction New

January 1, 1933

Public Service Plant, Property and Business

Exclusive of Fort Worth Division

P. McDonald Biddison, E. A. Steinberger, Ed. C. Connor,  
Engineers, Dallas, Texas

[fols. 7867-7868] Preliminary Development and Organization Costs, Undistributed General Costs, Going Value, and Cash Working Capital

### General Summary

#### Preliminary Development and Organization

Costs .....	\$4,474,272
Undistributed General Costs .....	9,241,074
Going Value (Cost of Business Development) ...	7,792,888
Cash Working Capital .....	1,701,600
<b>Total .....</b>	<b>\$23,209,834</b>

#### [fol. 7869] Scope of the Report

Any proper estimate of the reproduction cost of the property and business of Lone Star Gas Company must include all expenditures that would necessarily be incurred in the reproduction of an identical property and its attached business at the approximate date of the investigation. These expenditures, due in some measure to the sequence in which they would be incurred, but to a greater degree to certain inherent differences between them, logically fall into five general groups.

1. Preliminary development costs.
2. Organization and corporate costs.
3. Direct structural costs.
4. Undistributed general costs.
5. Cost of business development.

That portion of this appraisal that deals with direct structural costs, or the reproduction costs of the various units of physical property, is confined to the items of expense that can be definitely allocated to specific property accounts. All of the costs involved in this determination begin and end with the so-called construction period.

It is evident that no large natural gas enterprise, consisting, as does Lone Star Gas Company, of a highly complex and extensive system of natural gas production, transportation and marketing facilities, could be initiated by the digging of a ditch and the laying of pipe. Far in advance of any actual construction, the feasibility of the project would first be determined and the construction decided upon by a group of men experienced in the natural gas business, [fol. 7870] and capable of carrying through to successful completion a new enterprise that involved the expenditure of more than sixty millions of dollars. This preliminary step in itself would be the result of extensive investigations, and the acquisition of potential and producing natural gas reserves. A corporate organization would be perfected, and the necessary funds secured with which to construct the physical plant, provide for interest and taxes during construction, the cost of administrative, legal, engineering, supervisory and other general expenses during construction, as well as the funds that would be required for fixed charges during the period of business development.

An organization would be perfected that would function prior to and during the construction period. Additional leases and gas purchase contracts would be secured, detail market analyses and final engineering plans would be prepared, gas sales contracts would be negotiated, and negotiations for the purchase of materials and the letting of contracts would be entered upon.

This brief summary sets out in a general way some of the steps that would necessarily be taken, and some of the expenditures that would necessarily be made in advance of actual construction in connection with the reproduction of the property and business of Lone Star Gas Company.

As has been previously noted, that portion of this report that deals with the reproduction cost of the physical property of Lone Star Gas Company is confined to the cost of material, the cost of installation and such other costs as can be definitely allocated to specific property accounts. When an inventory has been prepared including every item of

physical property which enters into the construction of the [fol. 7871] system, and when a proper price has been applied to every item of inventory covering both the expense of acquiring the items of property and putting them in place as a part of the system, the result does not represent the entire cost of the physical property itself. This is true for the reason that in addition to these direct structural costs, charges would be incurred for expenses during construction so general in their nature as to prohibit a rational allocation of them to specific property items. These general or undistributed costs would consist of the salaries and expenses of the administrative and legal departments, the engineering and general construction supervisory departments, and other more or less subordinate groups. Money would be provided for all expenditures and the interest on the money represented by the expenditures for elements of property that had not passed into operation would be an outlay in addition to the capital expended, as would also be the taxes that would accrue on non-operative property during the construction period.

Upon the completion of a natural gas project of this character, the acquisition of the volume of sales now enjoyed by Lone Star Gas Company, by reason of business development that has extended over a period of more than twenty years, would be the result of a gradual process that would extend over a number of years subsequent to the construction of the physical elements of such a plant. During this period of business acquisition, a substantial portion of the completed plant would be idle in comparison with its capacity for service, measured by the actual deliveries of gas on the part of Lone Star Gas Company. The so-called fixed charges, or expenses for interest, taxes and depreciation, would accrue on this completed plant irrespective of [fol. 7872] the amount of business actually done. The difference between the earnings of the completed plant during this period of business development and the actual earnings of Lone Star Gas Company is a fair measure of the cost of reproducing the business of Lone Star Gas Company as distinguished from the cost of reproducing its physical property.

This portion of the appraisal is confined to an estimate of the expenses that would necessarily be incurred during the preliminary development and organization periods, to the

general and undistributed charges that would be incurred prior to, during and subsequent to the construction period, and to the cost of business acquisition during the development in the reproduction of the property and business of Lone Star Gas Company as of January 1, 1933.

These elements of expense cannot be inventoried with the same degree of precision as can the physical items of property, nor can they be priced from discount sheets or manufacturers' quotations. They are, nevertheless, an inescapable and substantial part of the costs that would be incurred in the reproduction of Lone Star Gas Company, and as such, they contribute proportionately to the present worth or value of the property. The necessity for an accurate determination of the amounts that would be involved in these factors is co-ordinate in importance with the necessity for an accurate determination of the amounts that would be involved in the reproduction of the physical property itself.

In order that the estimate of the preliminary general and development costs may have a rational basis, it will be necessary to determine the sequence of the various steps that would be taken and the time and the personnel that [fol. 7873] would be required for each step. It will also be necessary to determine the proportionate part of the total cost that would be made at specific dates as the reproduction program proceeded, and to fix the various undistributed charges with relation to the basis upon which the reproduction cost of the direct expenses is predicated.

In that portion of this appraisal that deals specifically with the direct costs of the physical property, it has been assumed that the company would organize its own construction forces, and build the plant without the services of a general engineering contractor. This assumption, which follows the general practice of Lone Star Gas Company in the historical development of its physical property, affects the general and undistributed charges in several particulars. The contractor's profit is eliminated from the structural costs, and the duties that would otherwise be absorbed by the engineering contractor are transferred to the administrative, engineering, and supervisory organization of the company. Throughout the preparation of these estimates, the actual experience of Lone Star Gas Company has been used as a basis whenever that experience has been applicable



to the phase of the estimate under consideration. In the matter of the preliminary development, organization and corporate costs, this method could not be applied on account of the discrepancy between the size of the project at the date of its historical inception and the size of the project at the date of this appraisal, and on account of the unique financial structure of Lone Star Gas Company which could not be used as the basis for financing at the present time.

In all other particulars, the personnel of the company actually engaged in the work that would be involved in the [fols 7874-7875] general undistributed costs in reproduction has been used in fixing the overhead costs, and the actual permanent engineering and geological records of the company, and the time and the personnel actually required to prepare these records have been used as the basis for the estimate of the reproduction cost of these records. By the use of these methods, the element of speculation that so frequently becomes predominant in estimates of this nature is practically eliminated.

[fol. 7876] Preliminary Development and Organization  
Costs

General Summary

Preliminary Geological Investigation .....	\$114,444
Preliminary Engineering Investigation .....	49,695
Detailed Geological Work—One Year .....	78,420
Fiscal Agent's Geological Check .....	15,000
Fiscal Agent's Engineering Check .....	15,000
Fiscal Agent's Title Certification .....	25,000
Undistributed Production Expenses .....	39,944
Organization and Corporate Expenses .....	141,769
Marketing Cost First Mortgage Bonds .....	1,140,000
Marketing Cost Preferred Stock .....	855,000
Remuneration for the Originating Group .....	2,000,000
<b>Total .....</b>	<b>\$4,474,272</b>

(Note.) The above summary does not include the fair market value of gas lands, gas leases, rights and options, nor the cost of producing gas wells transferred by the originating group to the corporation.

[fol. 7877] Preliminary Development and Organization  
Costs

General Definitions:

As used in this estimate of the reproduction cost of the property and business of Lone Star Gas Company, Preliminary Development and Organization Costs are intended to cover all expenditures that would necessarily be made by the originators of a natural gas production and transportation company identical with Lone Star Gas Company in connection with promoting the enterprise, interesting capital therein, and incorporating the company.

In the classification of investment (fixed capital account) in road and equipment of steam roads prescribed by the Interstate Commerce Commission, organization expense is defined as follows: "This account shall include all fees paid to governments for the privilege of incorporation, and office and other expenditures incident to organizing the corporation and putting it in readiness to do business; the cost of preparing and distributing prospectuses; cost of soliciting subscriptions for stock; cash fees paid to promoters, and the actual cash value (at the time of the organization) of securities paid to promoters for their services in organizing the enterprise; special fees; cost of preparing and issuing certificates of stock; cost of securing the necessary permits from State authorities and other like costs."

In *Des Moines Gas Company v. Des Moines* (238 U. S. 153) the United States Supreme Court gave a more general definition of this same element of cost and at the same time laid down the general rule to be followed in estimating this expense in connection with reproduction cost estimates. The definition and the rule are as follows: "A [fol. 7878] money expenditure in the promotion of an enterprise and in interesting capital therein including also legal expenses, obtaining the necessary franchise, as well as the cost of incorporating the company . . . It is not a question of what was actually expended therefor in the plant in question, but what it would cost to reproduce a similar plant at the present time."

Basic Assumptions:

Before proceeding to analyses of the preliminary development and organization costs that would be incurred in the

reproduction of Lone Star Gas Company, it will be necessary first to point out certain fundamental differences between the preliminary and development stages of a natural gas enterprise and those of any other public utility business; second, to outline the assumptions upon which this estimate is based; and third, to establish the chronological order in which the various initial steps would be taken.

A natural gas project is fundamentally a mining venture, and its successful completion and growth into a going concern is primarily dependent upon the result of a discovery of gas and upon the subsequent consolidation and development of sufficient gas reserves to justify the expenditure of large sums of money for transportation facilities. In conjunction with this discovery, there must be available within definite geographic limits a market for this gas. The size of this market, the possibilities for future growth, and the characteristics of the load, together with the probable volume of reserves, will determine the amount of the investment in pipe line and compressor station capacity.

The preliminary development of a project with these characteristics would be a much more complex and hazardous [fol. 7879] venture, for example, than the preliminary development of an electric power transmission system. In the case of the latter, a simple engineering determination of the proper location and capacity of a power plant in connection with a market survey would be the extent of the necessary preliminary work. There would be no necessity for the demonstration of the existence of a primary supply, nor would there be any necessity on the part of the originators for the acquisition, consolidation and development of a primary supply in order to secure the success of the venture.

For these and many other reasons that readily suggest themselves, the originating group of an enterprise identical with Lone Star Gas Company would be called upon to assume risks, and make intensive investigations and large investments far in advance of any permanent financing and corporate organization.

Insofar as the time that would be involved and the expense that would be incurred in preliminary development and corporate organization in reproducing Lone Star Gas Company, the history of Lone Star Gas Company affords no proper basis for estimate. The discrepancy between the extent of Lone Star Gas Company at the time of its incep-



tion and corporate organization, and the extent of the property at the date of this valuation, together with the dissimilar conditions in reference to financing that existed in 1909 compared with those existing in 1933, precludes the rational use of any historical date.

Certain assumptions must therefore be made that take into consideration the normal steps that would be taken, as of this date, in initiating the project and in creating the corporate entity. These basic assumptions are predicated [fol. 7880] upon an exact knowledge of the property itself, and upon the actual history of the various preliminary development and corporate organization of other large natural gas pipe line projects that have been promoted and constructed within the last few years.

It has been assumed:

1. That all natural gas development insofar as this development has been the result of direct exploration on the part of Lone Star Gas Company, or has been the result of the availability of Lone Star Gas Company as marketing agency, would be non-existent at the date of the initiation of the project.

2. That the market for the sale of natural gas, both domestic and industrial, insofar as this market has been created as the result of the construction of the pipe line system of Lone Star Gas Company, would be a potential market only at the date of the initiation of the project.

3. That all geological information secured by direct exploration on the part of Lone Star Gas Company, by the research of its geological department, or by the availability of Lone Star Gas Company as a marketing agency would be non-existent at the date of the initiation of the project.

4. That all engineering information in possession of Lone Star Gas Company, in reference to its markets, the rate of consumption and other factors affecting the sale of natural gas and the design and location of its pipe lines and compressor stations, would be non-existent at the date of the initiation of the project.

5. That the originating group capable of the successful promotion of a company identical with Lone Star Gas Com-

pany would consist of not less than four individuals, with substantial financial connections and wide experience in the natural gas business.

6. That the originating group would provide for all expenditures made prior to the date of permanent financing.

7. That the originating group would conduct all negotiations with the fiscal agents selected as underwriters; would perfect a corporate organization; and would furnish the equity provided by the financial structure agreed upon.

[fol. 7881] 8. That the financial structure would be based upon the issuance of 50% of the total sum required in first mortgage bonds, 25% in preferred stock, and 25% in common stock.

9. That the originating group would transfer to the corporation at the date of incorporation, and at their fair market value, all leaseholds, gas rights, gas purchase contracts and/or options, and all producing gas wells purchased or drilled by them during the development period.

10. That the originating group would be reimbursed for their services in connection with the promotion of the enterprise, for their out-of-pocket expenses for reports and fees, and for the market value of the assets transferred by them to the corporation from the proceeds of the sale of bonds.

11. That the time involved from the initiation of the enterprise to date of incorporation would be one and one half years.

#### Sequence of Preliminary Steps:

It is obvious that the initial step in the reproduction of Lone Star Gas Company would be a decision on the part of the originating group to construct a pipe line system to serve the markets now served by Lone Star Gas Company, provided an adequate supply of natural gas could be secured within commercial distances of these markets.

In the preparation of this estimate an attempt has been made to follow in logical order the normal sequence of events that would follow this decision and finally result in the perfection of a corporate organization that would carry the project through the pre-construction, construction, and business development periods.

It has been assumed that following the decision to proceed [fol. 7882] with the project, the originating group would begin the acquisition of a part of the gas reserves now held by Lone Star Gas Company and a partial development of these reserves for the purpose of testing the extent of their probable production. Gas purchase contracts and/or options to purchase gas would be secured from the owners of producing gas wells, and options would be secured on additional acreage. The basis for the acquisition of these reserves would be, in part, a general geological survey covering a substantial part of Texas, Southern Oklahoma, Southeast New Mexico, and Northwest Louisiana made by a firm of nationally known geologists.

In connection with the acquisition and partial development of reserves, a preliminary engineering survey would be made of the prospective markets and an estimate prepared of the probable cost of the pipe line system. Negotiations would be begun with potential consumers, and the owners of manufactured gas plants located in the larger cities for the purpose of securing a market for natural gas.

It has been assumed that at this juncture the economic feasibility of the project as a whole would have been demonstrated by the results of the geological investigation, the drilling tests and the findings of the engineering survey.

During the preliminary period, offices would be maintained at Dallas, and the member of the originating group, who would ultimately become the executive head of the corporation when organized, would be on the ground directing an organization that would be active in making detail geological investigations, securing additional acreage and gas purchase contracts, the drilling of additional wells, the [fol. 7883] preparing of sales contracts, and the beginning of detail plans and estimates for construction.

Throughout the progress of this work other members of the originating group would have begun negotiations with responsible fiscal agents for the purpose of securing commitments for a substantial part of the funds that would be required for the completion of the project and the payment of fixed charges during the development period.

Before these commitments could be secured, the underwriting group would require at least three independent re-

ports based upon engineering, geological, and legal investigations.

The engineering survey and report would be made by some nationally known engineering firm, or by some engineer familiar with natural gas projects and favorably identified with the industry. This survey would consist of a general survey of the markets, together with an estimate of the probable sales, both domestic and industrial, in the area proposed to be served, an estimate of operating expenses, an estimate of the cost of construction, and a check of the report prepared by the engineers of the originating group.

The geological survey would cover a study of all probable sources of gas supply commercially available to the prospective markets, together with a detail check of all geological data in possession of the originating group. This survey and report would also be made by a firm having national standing as geologists familiar with natural gas production.

The legal report would cover an opinion on the validity of title of all lands held in fee, leaseholds and gas purchase [fol. 7884] contracts, the examination of all contracts, tentative or closed, for the sale of gas, and an investigation of all regulatory legislation affecting the transportation and sale of natural gas.

In each case the firms or individuals making these reports would be selected by the fiscal agents. All fees and expenses incurred in their preparation would be borne by the originating group.

Upon the basis of favorable reports resulting from the results of the geological, engineering, and legal investigations, final commitments for financing would be secured from the fiscal agents, and corporate organization would proceed upon the basis of a financial structure mutually agreed upon by the originating group and fiscal agents.

At this point, the preliminary development period would end and the expenses attributable to this period would cease. Simultaneously the period of corporate organization would begin and the expenses incurred in connection with setting up of the corporate structure and placing it in readiness to do business would be directly chargeable to organization expense and corporate costs. Upon the perfection of the corporate organization, the direction of the affairs of the

project would pass from the originating group into the hands of the duly elected officers of the corporation and the organization that would function throughout the construction program would be perfected.

#### Estimate of Cost:

In order to properly estimate the costs that would be involved in the reproduction of Lone Star Gas Company [fol. 7885] ing the preliminary development period, several basic factors must be taken into consideration.

1. The time that would be involved from the beginning of the development of the project to the completion of permanent financing and corporate organization.
2. The total cost and extent of the project.
3. The value of the capital assets delivered to the corporation by the originating group.
4. The value of the information secured in connection with the several geological and engineering investigations.
5. The out-of-pocket advances made by the originating group during the development period.
6. The proper remuneration for the services of the originating group.

The last item of cost must be measured by the risks that would be involved in promotion, the type of personnel that would be required of an originating group for the successful promotion of an enterprise identical in all respects with Lone Star Gas Company as it now exists, the extent of the work and expenses that would be required of the originating group in connection with securing gas purchase contracts and gas sales contracts, and the extent to which the originating group would participate in the permanent financing of the corporation.

As previously noted, the initial steps in the development program would be the acquisition by the originating group of a substantial part of the acreage now owned or held under lease by Lone Star Gas Company, the acquisition of gas purchase contracts, or options for the purchase of gas [fol. 7886] from producing gas wells, the accumulation of definite information relative to the possibilities for sales in the existing markets, and preliminary estimates of the



cost of construction of a pipe line system adequate to serve these markets.

### Preliminary Geological Investigation:

The following resume sets out in detail the scope and estimated cost of the geological survey that would be required in order to determine the feasibility of constructing a natural gas transportation system identical with Lone Star Gas Company, and provide a basis for the initial acquisition of acreage. As before stated, this preliminary report would be made by a firm of nationally known geologists in order that the findings might be used as the basis for negotiations with fiscal agents. Upon the completion of this survey, the services of this firm would be dispensed with, and the detail geological work taken up by a geological organization working under the direction of the originating group.

### Extent of the Survey:

The area that would necessarily be incorporated in this survey would include all the territory within approximately four hundred miles of the City of Fort Worth, Texas. Specifically the area would include:

1. The Southern half of the State of Oklahoma.
2. All of Texas except a part of the Gulf Coast.
3. The Southeastern one-fourth of the State of New Mexico.
- [fol. 7887] 4. The gas producing areas of the State of Louisiana.

Certain portions of these four areas would not require attention for geological and other reasons that would be well known to geologists of experience. The areas that would be omitted from the general investigation for these reasons would include the mountainous regions, major synclinal troughs, territory already proved barren of gas by reason of past explorations, and depleted gas fields.

### Time Required:

A period of at least six months, or one hundred and eighty days, would be required for this undertaking, and the per-

sonnel required would be assigned in conformity to this schedule. A longer period of time in conjunction with a smaller personnel would be preferable to the schedule used in this estimate, and the larger personnel that this schedule would require for the reason that this arrangement would permit increased familiarity on the part of the field parties with the respective areas assigned to them, and as a consequence the finished report would be more thorough and accurate. The overall cost of either method would be approximately the same.

The element of time is always a matter of importance in development programs, and for this reason the six month schedule with the appropriate personnel has been adopted.

The personnel that would be required for an accurate and worth while survey of the area outlined above and within the time allotted would be as follows:

[fol. 7888] One chief geologist in charge of investigations.  
One automobile.

Field Party, Sou. Oklahoma	Field Party, Tex. Panhandle	Field Party, W. Tex. & N. Mex.
1 Geologist	1 Geologist	1 Geologist
1 Asst. Geol.	1 Asst. Geol.	1 Asst. Geol.
1 Inst. man	1 Inst. man	1 Inst. man
1 Auto and equipment	1 Auto and equipment	1 Auto and equipment
Field Party, All Other Areas	Office Force	
1 Geologist	2 Draftsmen	
1 Asst. Geol.	3 Clerks	
1 Inst. man		
1 Auto and equipment		

### Expense:

Chief geologist per diem and expenses .....	\$100.00
Four field parties each per day	
Living expenses .....	\$12.00
Geologist .....	35.00
Ass't. geologist .....	25.00
Instrument man .....	20.00
Auto expense .....	7.50
Equip. and incidentals .....	5.00
Total each party .....	\$104.50
Total four parties .....	418.00



2616

Office force .....	25.00
Office rent .....	5.00
Miscellaneous expense (Stationery, supplies, drawing materials, telephone calls, tele- grams, etc.) .....	30.00

Total expenses per day .....	\$578.00
Working days 180 .....	\$104,040.00
Firm fee 10% of cost .....	10,404.00

Total Preliminary Geological Expense.. \$114,444.00

Data:

Data secured as a result of the geological survey, described above, would be as follows:

[fol. 7889] (1) Complete maps showing:

(a) All gas fields within distances feasible for pipe line connection.

(b) All individual gas wells within a like distance.

(c) Distances between actual existing sources of gas and principle markets to be supplied.

(d) Approximate outline of structural conditions, and kinds of structures in and around all above mentioned gas fields and wells.

(e) Reconnaissance surveys of all lands, within the area outlined above, that have possibilities of producing gas.

(f) Topographic and stratigraphic conditions of areas through which pipe lines would have to pass.

(g) Cross-sections and charts showing sand thicknesses, character of producing formations, dips, etc.

(2) Individual and total open flow and rock pressure figures, together with logs, elevations, and names of producing formations of all existing gas wells shown on maps.

(3) List of gas wells subject to gas purchase contracts, including names and addresses of owners.

(4) Charts showing production of all gas wells and decline curves on same (if available).

(5) Estimates of total recovery of gas from existing gas fields and wells.

(6) Estimates of probable extensions of existing gas fields and areas around individual or isolated gas wells.

(7) Recommendations and conclusions by which acquisition of, and expenditures for gas wells, gas purchase contracts, lands and leases should be governed. Also preliminary data by which engineers should be guided in surveying for pipe lines.

During the progress of the preliminary geological survey, and upon the basis of its affirmative findings as it progressed, three definite steps would be taken simultaneously in connection with the development of the project.

First, a firm of nationally known engineers would be engaged for the purpose of making a market survey, a general design of a pipe line system that would connect the more promising gas areas as indicated by the geological report and the markets, a preliminary estimate of the cost of the system, and a preliminary estimate of probable earnings and

Second, offices would be opened at Dallas, Texas. A member of the originating group would establish permanent quarters at Dallas, Texas, a geological force would be organized to proceed with a detailed investigation of the area covered by the preliminary report, and an organization would be perfected for the purpose of securing leases, gas purchase contracts and/or options, and testing the acreage as secured.

Third, other members of the originating group would be making preliminary contacts with fiscal agents for the purpose of securing tentative commitments for permanent financing.

#### Preliminary Engineering Investigation:

The following resume sets out the scope and the estimated cost of a preliminary engineering investigation that would determine the extent of the market, the probable earnings, the general design and cost of construction, and the probable operating expenses of a natural gas pipe line system identical with that of Lone Star Gas Company as of January 1, 1933.

## Scope of the Investigation:

## (1) Market analysis:

Lone Star Gas Company now serves at wholesale six groups of cities and towns located in Texas and Southern [fol. 7891] Oklahoma as follows:

1. Dallas and County Gas Companies.
2. Fort Worth Division Lone Star Gas Company.
3. Community Natural Gas Company.
4. Texas Cities Gas Company.
5. Municipal Gas Company.
6. Main Line Towns.

The total number of individual cities and towns in each groups is as follows:

Distributing Groups	No. Cities or Towns
1. Dallas and County Gas Companies.....	5
2. Fort Worth Division Lone Star Gas Co.....	1
3. Community Natural Gas Company.....	237
4. Texas Cities Gas Company.....	2
5. Municipal Gas Company.....	21
6. Main Line Towns.....	4
Total Cities and Towns Served.....	270

The market analysis would consist of a study of larger markets, and a more or less general study of the lesser markets. A general industrial survey of the area as a whole would be made. This survey would include an actual check on the fuel consumption of the major industrials, the load characteristics of these industrials together with a schedule of industrial rates for gas for groups and individual consumers that would probably secure the business. It would also include a more general survey of the smaller industrials, an estimate of the volume of sales and revenue that might be derived from this group as well as a study of its load characteristics.

The domestic survey would consist of an estimate of the number of domestic consumers that might be secured in all [fol. 7892] cities and towns served and a detail study, based on temperature records, of the annual consumption that might be developed from domestic consumers, and a detail estimate of the probable peak requirements of the domestic

group. In connection with this study, estimates would be made of the probable rates of growth of all cities and towns proposed to be served.

(2) General plan and estimate of cost:

Upon the basis of the market analysis, together with the results of the geological survey, the size and location of the component parts of the transmission system, including compressor stations, would be tentatively worked out and an estimate of cost prepared.

(3) Estimate of operating expenses:

This estimate would consist largely of a study of the probable cost of gas, the cost of compression, and a general study of administrative and other operating charges.

Personnel:

The work would be carried on by a chief engineer and his office assistants located in Dallas, Texas, and several field parties that would be engaged in securing the basic data that would be assembled and correlated by the office organization.

In estimating the personnel that would be required for the field work, the general grouping by companies has been followed.

[fol. 7893] The approximate number of domestic meters in place for each group as of January 1, 1933, was as follows:

1. Dallas and County Gas Companies.....	70,956
2. Fort Worth Division Lone Star Gas.....	39,181
3. Community Natural Gas Company.....	78,214
4. Municipal Gas Company.....	32,759
5. Texas Cities Gas Company.....	13,973
6. Gainesville Gas and Electric Co.....	2,642
7. Waxahachie Gas Company.....	1,079
8. Southwestern Light and Power Co.....	304
<b>Total Domestic Meters in Place.....</b>	<b>239,108</b>

The approximate number of industrial consumers served by Lone Star Gas Company, all groups, was 1300 as of January 1, 1933.

Due to the reliable information that would be available from Chambers of Commerce and other sources in the larger cities, the necessary data could be secured more rapidly in these larger cities than in the widely distributed smaller

towns of the Community Natural Gas Company, and Municipal Gas Company groups.

The Dallas and County Gas Companies group would require at least sixty days for one competent investigator, the Fort Worth Division Lone Star Gas Company forty five days for one investigator, and the Community Natural Gas Company group two hundred and thirty seven man days or at least one man day per town served, the Municipal Gas Company group three man days per town served or a total of sixty three man days, the Texas Cities Gas Company group fifteen man days, and all other towns ten man days or a total of four hundred and thirty man days for the field work.

#### Time Required:

The report would be completed within ninety working days.

[fol. 7894] Inasmuch as the general design and estimates of cost would be of a preliminary character, a general reconnaissance only would be required of the engineer in charge. This reconnaissance would consist of a trip over all sections of the proposed system for the purpose of viewing the terrain, inspecting possible river crossings, and prospective compressor station sites. Contacts would be made with various manufacturers and supply houses for the purpose of securing tentative quotations on the various items of property that would enter into the construction of the plant.

#### Estimated cost of the investigation:

##### 1. Office Expense

Chief engineer in charge.....	90 days	@	\$100.00 per day	\$9,000.00
Four office engineers.....	360 days	@	35.00 per day	12,600.00
Stenographic work.....	3 Mo.	@	300.00 per Mo.	900.00
Office rent.....	3 Mo.	@	150.00 per Mo.	450.00
Office expense and supplies..	3 Mo.	@	500.00 per Mo.	1,500.00
Auto expense engineer in charge.....				300.00

##### 2. Field Expense

Field engineer Dallas.....	60 days	@	\$50.00 per day	\$3,000.00
Field engineer Ft. Worth....	45 days	@	50.00 per day	2,250.00
Field engineers.....	325 days	@	25.00 per day	8,125.00
Auto expense Dallas 1 car...	2 Mo.			200.00
Auto expense Ft. Worth 1 car	1 1/2 Mo.			150.00
Other auto expense 6 cars...	3 Mo.			2,700.00

##### 3. General Expenses

Expense.....	880 man days	@	\$4.00 per day	\$3,520.00
Firm fee.....				5,000.00

Total Estimated Expenses..... \$49,695.00



The primary objective of the originating group, the existence of ample gas reserves within commercial distances of [fol. 7895] the available markets having been determined by the preliminary geological survey, would be the creation of a corporate organization, properly financed by means of which the actual construction of the plant and its subsequent operation might be effected.

Before giving consideration to the financing of a Natural Gas project identical with Lone Star Gas Company as of January 1, 1933, responsible fiscal agents would require of the originating group definite assurance of an ample gas supply. A geological report indicating the existence of this supply even though prepared by a firm of national standing would be insufficient for a preliminary consideration of the project unless supported by a substantial ownership of leases, gas purchase contracts and/or options.

The engineering report covering estimates of cost and market analyses, while essential to the final negotiations, would be subordinate at this stage of the development for the reason that the individuals of the originating group, experienced in the natural gas business, would be able to anticipate in a general way the results of its findings.

In view of these facts, the assumption is made that the work in connection with the detailed geological investigations, the acquisition of acreage, and the drilling of wells would be vigorously pushed immediately upon receipt of favorable findings as the preliminary geological report progressed. This assumption leads to a consideration of the cost that would be involved in the detailed geological work that would be used as the basis for the selection of this acreage and the location and drilling of wells. This detailed [fol. 7896] geological work should be continued without interruption throughout the development and organization periods into the construction period. In connection with this phase of the estimate, only those expenses that would be incurred up to the date of the completion of corporate organization will be considered.

#### Basis of the Estimate:

The basis for the following estimate, and the outline of the scope of work that would be done in connection with the detailed geological work, is the estimated cost of reproduction within a period of four years of all geological data

and records and reports in possession of Lone Star Gas Company as of January 1, 1933.

Personnel:

The personnel required to begin operations when the preliminary geological survey had been completed and to bring all files, records, reports and other geological information now in possession of Lone Star Gas Company up to its present status, within a period of four years would be as follows:

One chief geologist in charge of all operations.

Four field geologists.

Four assistant geologists.

One paleontologist.

Two draftsmen.

Two clerks.

The chief geologist, paleontologist, draftsmen and clerks would have headquarters in Dallas, Texas, and would be provided with suitable offices and the necessary equipment with which to carry on the work.

[fol. 7897] Scope of the Work:

The duties of the chief geologist would be the supervision of all operations of the geological departments in the field and in the office. He would recommend or reject all work done in the field and in the office, and would be directly responsible for the operations of his field parties and his office force. He would be at all times in direct contact with, or available to, the members of the originating groups during the preliminary development period and the officials of the company during the construction period in order that he might be consulted on any matters pertaining to leases, gas purchase contracts, drilling and collateral activities. He would keep in constant touch with all activities within certain distances of headquarters, recommend the purchase of leases that should be acquired, recommend the locating of drilling sites, assist other departments associated with the geological department, and keep himself so advised as to be able to pass upon matters submitted to him on short notice.

The paleontologist would examine well cuttings and report them, file and record samples, advise as to the progress



of drilling operations, advise as to deeper drilling and new locations, and assist the chief geologist.

The draftsmen would prepare all maps and cross-sections, assist in keeping files, plat well logs, and assist the chief geologist and paleontologist.

The clerks would do all stenographic and clerical work, plat well logs, assist in keeping files, and assist in other [fol. 7898] general office work.

Each of the four field geologists, with an assistant, would be assigned to a specific territory or zone and would be provided with a suitable field office and all necessary equipment with which to carry on the field work.

The zones or territorial divisions would be as follows:

Zone 1. Southern Oklahoma.

Zone 2. Texas Panhandle.

Zone 3. Central West Texas.

Zone 4. All other areas contiguous to the principal markets of Lone Star Gas Company.

The work done by each field party would consist of surface and sub-surface mapping, the scouting of drilling wells, the recommending of desirable leases and drilling sites, the collecting and plotting of well logs, the collecting and studying of samples of formations drilled, the running of well elevations, the making of cross-sections, and the watching of operations of other companies and individuals in reference to leasing.

They would also make special reports and progress reports, and would assist the production department by advice in reference to suitable depths for casing seats and depths of expected production, or water horizons. They would also assist the pipe line department (when in construction) in routing their lines, or the preliminary engineering group (prior to construction) in reference to projecting their lines through the more promising gas areas and areas more favorable for pipe line construction.

They would give tentative estimates as to the probable supply of gas in specific areas, and by so doing, assist the designing engineers in their selection of pipe sizes.

[fol. 7899] All of this work would be done under the direct supervision of the chief geologist who would spend a portion of his time with each of the field parties.

## Defendant's Exhibit No. 28—Continued

## Costs

Salaries of Personnel			
Title	Per Month	Per Year	
Chief geologist	\$600.00	\$7,200.00	
Field geologist	400.00	4,800.00	
Field geologist	400.00	4,800.00	
Field geologist	400.00	4,800.00	
Field geologist	400.00	4,800.00	
Asst. geologist	200.00	2,400.00	
Asst. geologist	200.00	2,400.00	
Asst. geologist	200.00	2,400.00	
Asst. geologist	200.00	2,400.00	
Paleontologist	400.00	4,800.00	
Draftsman	175.00	2,100.00	
Draftsman	175.00	2,100.00	
Clerk	150.00	1,800.00	
Clerk	125.00	1,500.00	

Total.....\$48,300.00

Office Rent			
Location	Per Month	Per Year	
Dallas, Texas	\$150.00	\$1,800.00	
Zone 1	25.00	300.00	
Zone 2	25.00	300.00	
Zone 3	25.00	300.00	
Zone 4	25.00	300.00	

Total.....\$3,000.00

General Office Expense			
Item	Per Month	Per Year	
Telephone and Telegraph	\$50.00	\$600.00	
Supplies	100.00	1,200.00	

Total.....\$1,800.00

[fol. 7900]

Field Expense			
Party	Per Month	Per Year	
Chief geologist (average 20 days per month in field at \$5.00 per day)	\$100.00	\$1,200.00	
Automobile (2000 miles per month at \$.08 per mile)	160.00	1,920.00	
Party No. 1 (2 men 30 days in field per month at \$4.00 per day)	240.00	2,880.00	
Automobile (2000 miles per month at \$.08 per mile)	160.00	1,920.00	
Party No. 2 (same as No. 1)	240.00	2,880.00	
Automobile (same as No. 1)	160.00	1,920.00	
Party No. 3 (same as No. 1)	240.00	2,880.00	
Automobile (same as No. 1)	160.00	1,920.00	
Party No. 4 (same as No. 1)	240.00	2,880.00	
Automobile (same as No. 1)	160.00	1,920.00	

Total.....\$22,320.00

Recapitulation			
Expense	Amount		
Salaries	\$48,300.00		
Office rent	3,000.00		
Office expenses	1,800.00		
Field expenses	22,320.00		
Annual depreciation on equipment	3,000.00		
Total Annual Expense	\$78,420.00		

The equipment upon which depreciation at the rate of 15% per annum has been charged would consist of office furniture, typewriters, field instruments, microscopes, etc. It is estimated that this equipment would cost in excess of \$20,000.00 (see detailed list of geological equipment required under Administration During Construction).

#### Time Involved:

It was estimated that the preliminary development and organization period would extend over a period of one and [fol. 7901] one half years, and that the detailed geological work would, under the direction of the originating group, begin immediately following the completion of the preliminary geological report which would be completed in six months.

The time of the geological organization attributable to the preliminary development and organization period would be one year and the cost involved \$78,420.00.

#### Geological Investigation for Fiscal Agents:

This investigation would consist in the main of a check upon the geological data in possession of the originating group. It would be made subsequent to the completion of the preliminary geological report, subsequent to the completion of some of the work done by the geological organization of the originating group, and subsequent to the actual drilling of wells upon acquired acreage.

For these reasons the personnel required for this investigation and check would be comparatively small and the time required for its completion would not exceed sixty days.

This work would be done by a firm of geologists whose standing would be such as to make their report of value in connection with prospectuses that would be used in marketing the security issues.

It is estimated that the cost of this report would be not less than \$15,000.00.

#### Engineering Investigation for Fiscal Agents:

This investigation would consist of a check upon all market data, the general design of the system, the estimates of [fol. 7902] cost, and the estimate of earnings covered by the engineering data secured by the originating group.

As in the case of the geological check prepared for the fiscal agents, this engineering report would be made by a firm of engineers whose findings would have weight in connection with the issuance of securities. The personnel required for its preparation would be much smaller than the personnel required for the original investigation, and the necessary field and office work would be completed within sixty days.

It is estimated that the cost of this report would be not less than \$15,000.00.

The apparent duplication of work and expense in connection with these two reports prepared by firms selected by the fiscal agents could not be avoided in the reproduction of Lone Star Gas Company. Any group of fiscal agents engaged in the underwriting of more than fifty million dollars worth of securities for the construction of a natural gas project, would require these reports notwithstanding the nature of the information previously secured by the originating group.

#### Legal Investigation for Fiscal Agents:

It has been assumed that one of the basic requirements for underwriting would be the acquisition and partial development, on the part of the originating group, of a substantial part of the acreage now owned in fee or held under lease by Lone Star Gas Company. In connection with permanent financing, the validity of the titles of land owned in fee, or held under lease, as well as the titles in connection with gas purchase contracts would be a matter of primary importance. The fiscal agents would require a certification of all titles by a firm of attorneys whose opinion would have weight in connection with the marketing of the securities. The originating group would furnish this firm with title opinions prepared by their own attorneys, together with a copy of all abstracts. An examination of more than five hundred abstracts would be involved in this investigation, and the cost to the originating group for the certification would be not less than \$25,000.00.

#### Cost of Gas Lands, Gas Leases, Rights, and/or Options:

The value of the gas lands, gas leases, rights and/or options held by Lone Star Gas Company as of January 1,

1933, has been independently determined and included in the appraisal as a part of the physical property of Lone Star Gas Company as of that date. For this reason, any part of the value ascribed to these items cannot be included as a part of the development costs.

The necessity for the consideration of the appraised value of a part of these items in connection with the development period grows out of the fact that the date at which these expenditures would be made, from the standpoint of the corporation, would have a direct bearing upon the cost of Interest During Construction.

In view of the assumption that all gas lands, gas leases, rights, and/or options acquired by the originating group and transferred to the corporation when organized, would be transferred upon the basis of their fair market value (appraised value), the Estimated Cost of these property items becomes immaterial in connection with any money outlay on the part of the corporation.

[fol. 7904] The necessity for the consideration of the estimated cost of a part of these items in connection with the development period grows out of the fact that these costs would be a part of the out-of-pocket expenditures of the originating group, and as such, would have a direct bearing upon the amount of remuneration to which the originating group would be entitled.

It is estimated that the fiscal agents would require the originating group to acquire at least fifty per cent of the gas lands, gas leases, rights, and/or options held by Lone Star Gas Company as of January 1, 1933, before tentative commitments for permanent financing would be made. This requirement would cover, in proportionate amounts, the acreage classified as developed acreage and undeveloped acreage.

The value included in this appraisal for the gas lands, gas leases, rights, and/or options, developed and undeveloped, has been estimated at \$3,574,980.

At the date of incorporation, the originating group would transfer to the corporation one-half of these assets, and the corporation would reimburse the originating group with the proceeds from the sale of bonds representing one-half of the total value for gas lands, gas leases, rights, and/or options included in this appraisal, or \$1,787,490.



The cost to the originating group of the assets thus transferred would consist of the following items:

1. The original cost of the gas lands, leases, rights, and/or options actually transferred.

2. The cost of acquisition, including the expenses of a land and lease organization.

3. The cost of cancelled and surrendered leases, or leases eliminated by the fiscal agents.

[fol. 7905] 4. The cost of rentals accrued prior to transfer.

5. The cost of dry holes drilled in connection with the testing of acreage.

6. The cost of general supervision of drilling operations.

(1) The original cost of the gas lands, leases, rights, and/or options:

As developed in the subsequent analysis of the remuneration for the originating group, the actual acreage originally acquired by the originating group would be largely in excess of the acreage approved by the fiscal agents and transferred to the corporation at its fair market value, or appraised value.

This acreage would have been secured by the originating group largely upon the basis of geological investigations, inasmuch as the drilling explorations of Lone Star Gas Company, and the drilling explorations that have resulted from the existence of Lone Star Gas Company as a marketing agency were assumed to have been non-existent at the date of the initiation of the project. This assumption is a logical application of the theory of reproduction as applied to this property.

Acreage acquired under these circumstances would normally suffer heavy charge offs for cancellation, surrenders, and eliminations by the fiscal agents before this acreage could be comparable to the character of acreage now held by Lone Star Gas Company and assumed to have been transferred to the corporation by the originating group. In [fol. 7906] view of these circumstances it is estimated that the originating group would acquire as a minimum twice the amount of gas lands, gas leases, rights, and/or options actually transferred.

(2) The cost of acquisition:

The cost of acquisition would be represented by the salaries and expenses of a land and lease organization that would begin to function immediately upon decision of the originating group to begin the acquisition of acreage. This organization would:

(a) In conjunction with the Geological Department make thorough investigations of possibilities of all acreage, both producing and non-producing, within general areas prescribed by the originating group, and then determine from time to time the particular portion or portions of each general area in which non-developed acreage and producing properties were to be acquired.

(b) Likewise in conjunction with the Geological Department, keep in close touch with all drilling and producing wells in the general areas, by whomsoever drilled or operated.

(c) Prepare, or have prepared, and put in general use certain standard forms, such as scout reports, purchase orders, purchase drafts, options, escrow agreements, executory contracts, division orders, transfer orders, gas purchase contracts, oil and gas leases, moneral deeds, and general office records.

(d) Negotiate and finally consummate, through brokers and with owners, the acquisition of developed and undeveloped acreage within the areas aforesaid.

(e) Examine and approve, or have examined and approved, [fol. 7907] proved, all abstracts and other title papers in connection with each transaction.

(f) Install a complete and elaborate system of office records for entering up and keeping track of all leases and other properties acquired.

(g) Record all instruments necessary to be recorded and pay all fees therefor.

(h) Pay all delay rentals, royalties and other fixed sums due under the terms of instruments so acquired.

(i) From time to time, enter into contracts with other owners for joint test wells on blocks of acreage held partly by such other owners.



(j) Determine location of test wells on acreage wholly or partly owned and to handle all details in connection therewith.

(k) Determine from time to time which leases are to be continued by payment of delay rentals and which are to be allowed to lapse for non-payment.

(l) Have all releases executed and delivered to land owners.

(m) Conduct all correspondence and negotiations having to do with the properties generally, other than problems relating to accounting, operating and the like.

This organization would function throughout the Development and Organization period and would continue to [fol. 7908] function as part of the administrative and legal organization throughout the pre-construction and construction periods.

(3) The cost of cancelled and surrendered leases, or leases eliminated by the fiscal agents:

Upon the assumption that the originating group would acquire during the development period twice the amount of acreage finally accepted by the fiscal agents, the cost of cancellations, surrenders, and eliminations, would result in an over all cost to the originating group of an amount equal to the original cost of the acreage actually transferred.

(4) The cost of rentals accrued prior to transfer:

The cost of rentals accrued during the development period would be comparatively small due to the short time included in the development period taken in connection with the fact that leases would not be acquired until some definite information had been secured from the results of the preliminary geological survey.

Such rentals as would accrue upon leases secured during the early months of the development period would contribute to the cost of such leases.

(5) The cost of dry holes drilled:

The ratio of dry holes to total wells drilled during the development period would necessarily be largely in excess

of the actual experience of Lone Star Gas Company within [fol. 7909] the past years. Practically all drilling done during this period would be based upon the geological data furnished by the preliminary report, and the subsequent investigations of the originating groups own geologists. The drilling in the areas as proved would be reduced to the minimum, and the exploration program extended to other areas in order to prove the unexplored territory under lease.

Each of these factors would contribute to an increase over the normal dry hole ratio. It is estimated under these conditions that conform to those under which the drilling would actually take place in the reproduction of Lone Star Gas Company, that the percentage of producing wells would not exceed fifty per cent of the total wells drilled.

As of January 1, 1933, Lone Star Gas Company owned 270 producing gas wells located as follows:

Texas	
Field	No. Wells
Cheaney .....	18
Leeray .....	45
Sipe Springs .....	8
Miscellaneous .....	12
Panhandle .....	78
Petrolia .....	49
Total Texas .....	210

[fol. 7910] Oklahoma	
Field	No. Wells
Chickasha .....	43
Duncan .....	9
Fox .....	8
Total Oklahoma .....	60
Total Oklahoma and Texas .....	270

In connection with the transfer by the originating group to the corporation of one-half of the gas lands, gas leases, rights, and/or options owned by Lone Star Gas Company as of January 1, 1933, it has been assumed that the ratio between developed and undeveloped acreage existing at this date would apply to the acreage transferred.

2631

It would not be reasonable to assume that the drilling of one-half the total number of wells owned by Lone Star Gas Company as of January 1, 1933, would be required to establish this ratio of developed and undeveloped acreage. For this reason, the following estimate has been made of the minimum number of wells, by fields, that would be required to establish this ratio.

Texas		
Field		No. Wells
Brad		2
Cheaney		5
Desdemona		1
X-Ray		1
Frankell		1
Leeray		15
Moran		1
Petrolia		1
Ranger		1
Shamrock		20
Sipe Springs		3
[fol. 7911]		
Tiffin		1
Total Texas		52
Oklahoma		
Field		No. Wells
Chickasha		6
Duncan		2
Loco		3
Walters		1
Total Oklahoma		12
Total Oklahoma and Texas		64

In the above estimate and allocation of wells, consideration has been given to the amount of developed and undeveloped acreage held by Lone Star Gas Company in each of the fields as of January 1, 1933.

This estimate of the number of producing gas wells developed through the explorations of the originating group fixes the number of dry holes that would result from fifty per cent ratio at 64.

The minimum average direct cost of these unsuccessful tests would not be less than \$20,000.00 per well, or a total estimated expenditure of \$1,280,000.00 on the part of the originating group that would be absorbed in the appraised value of the leaseholds actually transferred.

(6) Cost of general supervision of drilling operations:

If all wells drilled by the originating group were drilled under contract which would be the logical method of procedure, it would be necessary for them to maintain an organization for the proper supervision of the field operations.

[fol. 7912] This organization would consist of a superintendent of production and office assistants together with district foremen with headquarters in the several fields.

The superintendent of production would be responsible for:

- (a) The letting of drilling contracts.
- (b) The general supervision of all drilling operations.
- (c) The setting of pipe.
- (d) The finishing of wells.
- (e) The ordering of all material.
- (f) The arranging for water and fuel.
- (g) The letting of contracts for the construction of rigs and hauling of material.
- (h) The continuing or abandoning of drilling (in connection with the geological department).

The expenses of this department during the development period insofar as this cost would be properly allocated to dry hole expense would be a part of the cost of the acreage transferred by the originating group.

In the foregoing analysis, no attempt has been made to estimate the cost of the several items that would determine the expense of the originating group in connection with gas lands, gas leases, rights, and/or options transferred to the corporation.

It is evident that this cost would approximate the appraised value of the same items that has been used as the basis for the corporate expenses incurred in the transfer. The dry hole expense alone has been conservatively estimated at more than a million dollars. The cost of cancelled, surrendered, and eliminated leases together with the cost

of lands, leases, rights, and/or options acceptable to the fiscal agents, would be substantially in excess of this amount [fol. 7913] with no consideration given to other items of expense.

Throughout this analysis of Preliminary and Development Expenses, each step has been based upon a logical sequence of the necessary steps that would be involved in the promotion, and a conservative estimate has been made of the costs that would be incurred in each of these steps insofar as these costs have been made a part of the reproduction cost estimate.

The estimated cost to the originating group of the gas lands, gas leases, rights, and/or options transferred to the corporation has not been made a part of the reproduction cost of Lone Star Gas Company as of January 1, 1933. Furthermore, certain inconsistencies would arise in connection with any determination of the cost of these items as distinguished from their value. For example: the original cost of the lands held in fee in the Petrolia field was based upon the existence of reserves that had been greatly depleted at the date of this appraisal. In fact, all developed leaseholds included in the transfer have been evaluated upon the basis of a certain percentage of withdrawals of gas that would be inconsistent with the assumption of the non-existence of Lone Star Gas Company at the initiation of the project.

For these reasons, it has been assumed that the cost to the originating group of the acreage transferred at the date of incorporation would be equal to the appraised value at which this acreage has been included in the appraisal, and the foregoing analysis of the constituent elements of this cost has been made for the purpose of showing that this assumption could not be substantially in error.

#### [fol. 7914] Cost of Producing Gas Wells:

It has been estimated that at least sixty-four producing gas wells would be required to prove the producing acreage held by Lone Star Gas Company as of January 1, 1933.

The estimated direct cost of completing these wells as developed by this appraisal as well as the location of the wells by fields is shown in the following tabulation:



## Texas

Field	Cost per Well	Number of Wells	Total
Brad .....	\$19,292.00	2	\$38,589.00
Cheaney .....	19,878.00	5	99,390.00
Desdemona .....	19,292.00	1	19,292.00
X-Ray .....	19,292.00	1	19,292.00
Frankell .....	19,292.00	1	19,292.00
Leeray .....	25,382.00	15	380,730.00
Moran .....	19,292.00	1	19,292.00
Petrolia .....	9,226.00	1	9,226.00
Ranger .....	19,292.00	1	19,292.00
Shamrock .....	12,336.00	20	246,720.00
Sipe Springs .....	18,313.00	3	54,939.00
Tiffin .....	19,292.00	1	19,292.00
Total .....			<u>\$945,341.00</u>

## Oklahoma

Field	Cost per Well	Number of Wells	Total
Chickasha .....	\$13,416.00	6	\$80,496.00
Duncan .....	11,151.00	2	22,302.00
Loco .....	6,755.00	3	20,265.00
Walters .....	11,151.00	1	11,151.00
Total .....			<u>\$134,214.00</u>

Total Texas and Oklahoma ..... \$1,079,555.00

The general production expenses attributable to these direct charges is estimated at 3.7 per cent of \$1,079,555.00, or \$39,944.00.

## [fol. 7915] Organization and Corporate Costs:

Following the agreement between the fiscal agents and the originating group with reference to the financial structure of the corporation, the actual creation of the corporate entity would begin.

## 1. Preparation of charter, by-laws, and contract for financing:

The preparation of the corporate charter and by-laws and the execution of the contract for financing would be the

first steps in the organization program. This work would be done jointly by the attorneys of the originating group and the fiscal agents.

The attorneys representing the fiscal agents would be members of a firm favorably identified in financial circles, with work of this character. The fees for their services in this connection and the subsequent phases of the corporate organization and the financial set up would be not less than \$30,000.00.

The attorneys for the originating group would be their regularly retained counselors, their opinions would not be used in connection with the marketing of the securities, and the fees for these services in this connection and the subsequent phases of the corporate organization and financial set up would not be less than \$15,000.00.

## 2. Charter and Qualification fees:

The charter fees in the State of Texas for corporations having an authorized capital stock in excess of \$2,640,000.00 is \$2,500.00. In the State of Oklahoma the qualification fee [fol. 7916] is \$1.00 per \$1,000.00 of capital expended in the State (estimated for Lone Star Gas Company as of December 31, 1931, to be approximately \$7,500,000.00) which would result in a fee of \$7,500.00, or a total of \$10,000.00 for charter and qualification fees.

## 3. Execution of mortgage and issuance of securities:

The attorneys for the originating group and the fiscal agents would jointly prepare the mortgage and trust indenture. The cost of their services with reference to this and other phases of corporate organization has been provided for in the allowances previously made.

Certain definite out-of-pocket expenditures would be necessary in connection with the subsequent steps.

An estimate of the total expenditures would be made for the purpose of developing the subsequent calculations. This estimate has been assumed to be as follows:

Cost of physical property and general costs	\$64,000,000.00
Working capital and supplies	2,000,000.00
Requirements for fixed charges during the development period	2,000,000.00
<b>Total estimated requirements</b>	<b>\$68,000,000.00</b>



The capital structure assumed, 50% of the total requirements in bonds, 25% in preferred stock, and 25% in common stock would require the following issues:

	Cash Received	Price	Securities Issued
Bonds	\$34,000,000.00	\$90.00	\$37,778,000.00
Preferred Stock	17,000,000.00	90.00	18,889,000.00
Common Stock	17,000,000.00	100.00	17,000,000.00
	<u>\$68,000,000.00</u>		<u>\$73,667,000.00</u>

[fol. 7917] For the purpose of this estimate the bonds have been placed at \$38,000,000.00, the preferred stock at \$19,000,000.00, and the common shares at \$17,000,000.00 par basis, or a total issue of \$74,000,000.00.

Upon this basis, the following expenses would be incurred:

(a) Federal capital stock issue tax:

\$36,000,000.00 total par value at \$.05 per \$100.00 \$18,000.00

(b) Engraving stock certificates at \$.08 each:

Certificates of preferred stock	\$608.00
Certificates of Common Stock	136.00
Total	<u>\$744.00</u>

(c) Listing securities on the Pittsburgh Stock Exchange:

First \$500,000.00 of capitalization	\$200.00
Next \$500,000.00 of capitalization	100.00
Next \$24,000,000.00 of capitalization at \$50.00 per each \$1,000,000.00	1,200.00
Next \$49,000,000.00 of capitalization at \$25.00 per each \$1,000,000.00	1,225.00
Total	<u>\$2,725.00</u>

(d) Printing mortgage:

Printing mortgage	\$500.00
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(e) Recording mortgage in:

62 counties in Texas and 14 counties in Oklahoma	\$3,800.00
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## (f) Engraving bonds at \$.50 per bond:

\$1,000.00 bonds—(34,000.00 each) .....	\$17,000.00
500.00 bonds—(8,000.00 each) .....	4,000.00
<b>Total</b> .....	<b>\$21,000.00</b>

## [fol. 7918] (g) Federal tax on bonds at \$.05 for each \$100.00:

\$38,000.00 00 par value .....	\$19,000.00
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## (h) Trustee's fees and legal fees in connection with certifying, signing, and sealing 42,000 00 bonds at \$.50 each ...

\$20,000.00

## Recapitulation

Item	Amount
1. Attorney's fees fiscal agents .....	\$30,000.00
2. Attorney's fees originating group .....	15,000.00
3. Charter and Qualification fees:	
(a) State of Texas .....	2,500.00
(b) State of Oklahoma .....	7,500.00
4. Execution of mortgage and issuance of securities (attorney's fees included in items 1, and 2):	
(a) Federal capital stock tax .....	18,000.00
(b) Engraving stock certificates .....	744.00
(c) Listing securities .....	2,725.00
(d) Printing mortgage .....	500.00
(e) Recording mortgage .....	3,800.00
(f) Engraving bonds .....	21,000.00
(g) Federal tax on bonds .....	19,000.00
(h) Trustee's fees .....	21,000.00

**Total organization and corporate costs** .....

**\$141,769.00**

The foregoing estimate has been made upon security issues which would be estimated to amply cover all expenditures in connection with the construction of the property, the preliminary expenses incurred prior to construction, the undistributed general charges including Interest During Construction, the purchase of the necessary stock of materials and supplies required for operation, the initial working capital, discounts on the securities issued, and an esti-

mated amount with which to meet the excess cost over operating revenues of fixed charges and operating expenses during the period of business development.

Nothing has been included in the foregoing estimate for [fol. 7919] Financial Costs other than the out-of-pocket expenditures that would be made in connection with the fiscal agent's investigation of the project, the preparation and filing of the mortgage, the printing and listing of securities, and such capital stock and bond taxes as would be imposed by governmental authority.

In addition to the foregoing costs, the corporate organization created for the purpose of reproducing the property and business of Lone Star Gas Company would incur substantial expenses in marketing the securities issued, and would also absorb the monetary loss represented by the difference between the par-value of the securities issued and the price paid for the securities by the ultimate purchasers. There could be no escape from the incurrence of these costs in the reproduction of Lone Star Gas Company as of January 1, 1933, nor could any other enterprise of like magnitude have been financed at that time without the incurrence of these charges in substantial amounts.

It is obvious that if the cost of financing as represented by brokerage charges or the equivalent expenses of marketing the securities of the corporation would be an inescapable out-of-pocket expense in the reproduction of the property and business of the company at the appraisal date, then any appraisal reflecting the true reproduction cost of the property and business of Lone Star Gas Company as of January 1, 1933, must include a proper allowance to cover these charges.

It is also obvious that if the securities issued would of necessity be placed in the hands of the investing public at a price less than the par-value of these securities, some provision must be made to compensate the issuing corporation [fol. 7920] for the added interest above the coupon rate that such discounts would impose.

#### Brokerage or Marketing Costs:

Of the two elements of financial costs herein discussed, brokerage or an equivalent marketing cost is the more definite. It would be incurred as an out-of-pocket expenditure without reference to current market conditions, the credit

of the issuing corporation, or the coupon rates of the securities issued. For this reason, brokerage as distinguished from discount, is a proper element in a rate-base determined by the cost of reproduction.

No large issue of securities has ever been placed in the hands of the investing public without the incurrence of marketing costs on the part of the issuing party. The security issues of the United States Government afford no exception to this general rule, and these expenses would be incurred whether the issuing company marketed its securities through its own organization, or utilized the facilities and organization of an investment banker.

Historical consideration must give way to present conditions in reproduction cost estimates. This fact is evidenced by the use of present prices for materials of construction and present rates for labor in all reproduction cost estimates. Another example of this basic fact is found in a situation wherein a substantial part of a property may have been built before the perfection and general adoption of certain labor saving devices that would be applicable to the particular classes of construction involved. Any engineer in the preparation of a reproduction cost estimate of this property would formulate his cost data upon the basis of the normal methods of construction in general use at the appraisal date, and would give no consideration to the fact [fol. 7921] that a substantial part of the property had been constructed by obsolete and more costly methods.

It follows as a corollary of this basic proposition that the financial structure of Lone Star Gas Company, which for a public utility is unique, and which has been the result of more than twenty years of cumulative development, can have no proper bearing upon the cost of reproduction insofar as the financial structure is involved at the appraisal date. In reproduction, Lone Star Gas Company could not be financed as it has been financed historically, and the problem resolves itself into the determination of the financial structure which would be the normal one at the date of inquiry, and which would result in the securing of funds necessary for construction and business development at a minimum cost, brokerage discounts and coupon rates considered.

In the final analysis, reproduction cost is simply a measure of value, and whenever there is a divergence between cost and value, or whenever the situation is such that cost does not contribute to value, value alone must be considered.

In the instant case wherein brokerage, or the marketing costs of security issues is involved, there is no divergence between cost and value. Lone Star Gas Company is financed and is a going concern. The money required for the construction of its property, and the development of its business has been assembled and transformed into units of property and business whose cost of duplication can be fairly measured in terms of dollars. It follows as an inevitable conclusion that if under any assumed conditions, it would cost money to assemble the dollars required to duplicate this property and business, then this property soundly [fol. 7922] financed is worth more than the aggregate sum represented by the dollar measure of its integral parts. The present value of this increment in worth cannot be less than the cost of assembling the dollars required by a normal financial structure. This conclusion may be clarified by the statement that the collection of a large sum of money so that it is available for the purchase of the materials of construction, and for the payment of services required for the initiation of a business enterprise, has a peculiar and intrinsic worth to the enterprise for which it is available over and above a like sum of money not thus assembled and available for use. The measure of this worth or value is the normal cost of assembly.

The Interstate Commerce Commission in its classification of investment in road and equipment of steam roads, clearly recognizes the propriety of the inclusion of the cost of assembling capital as a capital item. In its definition of Organization Expenses the following statement is found: "This account shall include \* \* \* cost of preparing and distributing prospectuses; cost of soliciting subscriptions for stock; cash fees paid to promoters, and the actual cash value (at the time of the organization) of securities paid to promoters".

#### Discount:

As indicated by the quotations on all natural gas utilities securities current as of January 1, 1933, no securities, either senior or junior, issued for the purpose of securing funds for the construction of a natural gas producing and transporting system, could have been disposed of except at a substantial discount below the par value of the security



issue. This condition has become more marked since the appraisal date and applies to the security issues of all [fol. 7923] natural gas utilities without regard to their records for continuous service, and without regard to their record of earnings.

No hypothesis can be proposed with reference to a financial structure, or to the obvious desirability of the project, that can escape the general proposition that both senior and junior securities of a natural gas producing and transporting company would of necessity be disposed of at substantial discounts below par-value.

Discounts on security issues, however, unlike the direct costs of assembling capital, do not represent out-of-pocket expenditures. Furthermore, discount to a greater degree than marketing costs reflects the credit rating of the organizers of the issuing companies, and the coupon rates of the securities issued: In the final analysis, discount is simply an increment above coupon rates of interest, and as such, reflects the cost of money as measured by interest charges. For these reasons, discount on security issues is not a proper element in a rate-base and it is, therefore, omitted in this appraisal as an element of the reproduction cost of Lone Star Gas Company as of January 1, 1933.

On the other hand the current discounts on securities, similar in all respects to the securities that would be issued in the reproduction of Lone Star Gas Company should be one of the dominant factors in the determination of what constitutes a fair rate of return for a natural gas pipe line company.

#### Calculation of Financial Costs, or the Costs of Assembling Capital:

In this estimate of Preliminary Development and Organization Costs, certain basic assumptions have been made with reference to the capital structure of the company, and the obligations assumed by the originating group that must be [fol. 7924] considered in connection with the estimate of financial costs.

(I.) It was assumed that the originating group would be responsible for securing the funds represented by subscriptions for common shares, and that all costs in connection therewith would be included in the amount allowed the originating group as compensation for their promotional

services. This method of handling the disposition of the common shares of the company would relieve the corporation of the marketing expense of twenty five per cent of its capital issue.

(II.) For the remaining seventy five per cent of the capital issue, it has been assumed that twenty five per cent of the total money required would be secured through the sale of eight per cent preferred stock, and fifty per cent through the sale of six and one-half per cent first mortgage bonds. As previously stated, this assumption does not conform to the financial structure of Lone Star Gas Company, but creates a situation with reference to the cost of marketing securities that would result in substantially lower costs than if the existing financial structure had been used as the basis for estimate. The cost of assembling capital by means of the sale of preferred stock, and first mortgage bonds, particularly in the market of January 1, 1933, would have been substantially less than the cost of assembling a like sum of money through the sale of common shares.

Throughout the preparation of this estimate, the actual experience of Lone Star Gas Company has been used provided this experience had a logical application to the problem under consideration. Lone Star Gas Company has issued and sold neither preferred stock, nor mortgage [fol. 7925] bonds. Lone Star Gas Corporation, however, whose principal asset is the ownership of the common shares of Lone Star Gas Company, has disposed of both classes of securities, but in a much lower ratio to total assets than the ratio used in the hypothetical financial structure. Furthermore, at the time these securities were placed in the hands of the investing public, the corporation was a going concern with a record of successful operation and normal earnings. For these reasons, the use of the actual cost to Lone Star Gas Corporation for the assembling of capital by the issuance of preferred stock and bonds as the basis of the estimate of similar charges in the reproduction of Lone Star Gas Company as of January 1, 1933, is more conservative from the standpoint of costs than a strict interpretation of the rules governing reproduction cost estimates would justify.

In May, 1927, Lone Star Gas Corporation issued \$15,000,000 of five per cent debentures. The initial sale of this issue was made at \$98.75 per \$100 unit of the issue. The



marketing cost to Lone Star Gas Corporation, exclusive of all incidental charges and expenses, was \$3.00 per \$100 unit of the issue.

It has been previously estimated that an equivalent of 380,000 first mortgage bonds of \$100 par value each would constitute the underlying or senior issue in connection with the best financial structure that could be suggested for securing the funds necessary for the reproduction of Lone Star Gas Company as of January 1, 1933. It is certain that this issue could not have been placed in the hands of the investing public as of that date for a unit cost as low as \$3.00 per \$100 unit of issue. For the purpose of this estimate, however, this conservative figure has been used with reference to the marketing costs of first mortgage bonds.

[fol. 7926] In October, 1929, Lone Star Gas Corporation issued \$8,000,000 of 6.5 per cent preferred stock. The initial sale of this issue was made at par, and the marketing cost to Lone Star Gas Corporation, exclusive of all incidental charges and expenses, was \$4.50 per \$100 unit of the issue.

What has been said with reference to the cost of marketing first mortgage bonds applies with greater force to the cost of marketing junior securities. Conditions were much more favorable for the disposition of junior issues in 1929 than the conditions prevailing as of January 1, 1933. Furthermore, as previously stated in the case of both issues of Lone Star Gas Corporation, the issues themselves represented a relatively small part of the total capital structure, and the issuing company was a going concern with a long operating history, and a record of satisfactory earnings. For these and other reasons, the adoption of \$4.50 per \$100 unit as the estimated marketing cost of 190,000 \$100 units of preferred stock in the reproduction of Lone Star Gas Company as of January 1, 1933, is extremely conservative, and the figure adopted is substantially less than the marketing costs that would have been incurred as of that date.

Cost of Marketing First Mortgage Bonds:

380,000 \$100 units at \$3.00 each .....	\$1,140,000
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Cost of Marketing Preferred Stock:

190,000 \$100 units at \$4.50 each .....	855,000
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Total Marketing Costs .....	<u>\$1,995,000</u>
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[fol. 7927] Remuneration for the Originating Group:

As previously noted the remuneration for the originating group would be measured by several factors.

1. The type of personnel that would be required for the successful promotion of an enterprise identical with Lone Star Gas Company as of January 1, 1933.
2. The time that would be required to bring the project from its initial stage to the completion of corporate organization.
3. The total cost and extent of the project.
4. The risks involved in the promotion.
5. The amount of the out-of-pocket advances made by the originating group during the development and organization period.
6. The value of the services of the originating group in
  - (a) Negotiating for, or closing gas sales contracts.
  - (b) Negotiations with the promoters of distribution properties for the construction of natural gas distributing systems in the market area served by the pipe line company.
  - (c) Negotiating with the fiscal agents for the permanent financing of the corporation.
  - (d) Setting up the financial structure of the corporation.
  - (e) Organizing the corporation and placing it in readiness to do business.
7. The extent of the participation of the originating group in the permanent financing of the corporation.
8. The expenses of the originating group included in their remuneration.
9. The fees normally expected and received for services of a similar nature.

In the preparation of the estimate no consideration has been given to the abnormal conditions existing at this time with reference to the promotion of enterprises and the marketing of securities.

[fol. 7928] Type of Personnel That Would be Required:

It has been previously stated that the personnel that would be required to initiate and bring to a successful conclusion the promotion of a natural gas enterprise identical with Lone Star Gas Company would consist of a group of not less than four men of exceptional ability with substantial financial connections, and wide experience in the natural gas business.

This assumption assures a minimum expense in connection with development charges.

This is true for the reasons that if the individuals of the originating group did not have these characteristics, the preliminary period would be of much longer duration than the one and one half years assumed in this estimate, fiscal agents would be less ready to assume underwriting responsibilities, and delays would be incurred in negotiations with them, the probabilities of increased costs through errors of judgement would be substantially increased, difficulties would be encountered in securing cooperation from other corporations, or individuals with reference to the construction of the necessary distribution plants in the various cities and towns proposed to be served, and the cost of marketing securities and the spread between the price received by the corporation and their par value would be increased.

Men having the qualifications of this originating group, and assuming the responsibilities and risks that the promotion of Lone Star Gas Company would involve, could not be attracted to the promotion unless its successful conclusion carried with it the assurance of substantial financial [fol. 7929] remuneration for their services. This remuneration would be greatly in excess of any consideration based upon salaries however large.

Time Involved:

The preliminary development and organization period has been estimated as one and one half years.

In view of the magnitude of the project and the amount of detail work that would be required in connection with the field work, the acquisition of leases, the drilling of wells, the negotiations with bankers, the negotiations with owners of distribution plants, prospective builders of distribution plants and prospective large industrial customers and the

work in connection with corporate organization, the entire time of each member of the originating group would be absorbed throughout the period.

### Total Cost and Extent of the Project:

The total remuneration for the originators of any project is a function of the total cost and the complexity of the project. The amount of money required for the reproduction of Lone Star Gas Company as of January 1, 1933, would not be less than sixty five million dollars without consideration of the fixed charges during the period of business development.

The preliminary development stages of a large natural gas producing and marketing system would be more complex and would require of the originators more intensive application than would the preliminary stages of any other public utility involving a like expenditure of money.

Each of these factors has been taken into consideration in fixing the fee for the originating group.

### [fol. 7930] Risks Involved in the Promotion:

The percentage of ventures that fail in the development period is relatively large. Other ventures that are finally launched have a background of failure on the part of one or more promotional groups. The possibility of loss on the part of any originating group is an inherent characteristic of any business promotion. This fact applies with particular force to the promotion of an enterprise that is based upon the successful outcome of the most hazardous of all mining ventures.

The fact that Lone Star Gas Company is in successful operation as of the date of this appraisal would not eliminate this element of risk in reproduction.

It has been assumed as one of the basic factors of this estimate that the originating group would transfer to the corporation at their fair market value (as of January 1, 1933) a substantial part of the lands, leases, gas purchase contracts, and producing gas wells now owned by Lone Star Gas Company.

The gas reserves of Lone Star Gas Company represented by lands held in fee or leases, and gas rights as of January 1, 1933, are the result of twenty years experience and exploration in the territory and a culling of unproductive or

unpromising acreage. From 1918 to 1933, inclusive, \$2,471,593.76 has been written off the books of Lone Star Gas Company for cancelled and surrendered leases.

In order that the acreage transferred to the corporation by the originating group might prove acceptable to underwriters as evidence of a supply adequate to justify the [fol. 7931] financing of the project, the originating group would acquire and test acreage largely in excess of the amount actually transferred. During this period of exploration and testing, the dry hole ratio, despite the geological information derived from the investigations previously set out, would be abnormally high as would be the concurrent expense for cancelled and surrendered leases. The wells drilled during this initial stage of the development would necessarily be located in semi-wildcat territory, and the leases secured would not have been selected upon the basis of information secured through exploration.

It is certain that the fiscal agents would scrutinize with extreme care the value of the leaseholds transferred to the corporation and would require that all wells be producers of gas and be in good condition.

The originating group could have no assurance at the initiation of the project that their out-of-pocket expenditures for lands in fee, leaseholds, gas rights, and exploration and testing would be reimbursed by the sum represented by the fair market value of the lands in fee, leaseholds, and gas rights acceptable to the fiscal agents, and the reproduction cost of the producing gas wells.

#### The Out-of-Pocket Advances of the Originating Group:

The originating group would advance all money required for:

1. The preliminary geological survey.
2. The preliminary engineering survey.
3. The detailed geological work.
4. The purchase of all lands held in fee, all leaseholds and options together with the cost of their acquisition.
5. The drilling of wells together with the supervisory expenses in connection therewith.
- [fol. 7932] 6. The fiscal agent's geological report.
7. The fiscal agent's engineering report.
8. The fiscal agent's legal report on titles and contracts.



9. The organization of the corporation.

10. Their office expenses, traveling expenses, the salaries of all clerks, stenographers and technical advisors other than those specifically covered in the foregoing items.

It has been assumed in connection with the foregoing items that the originating group would be reimbursed by proceeds of the sale of bonds of the corporation for the actual expenses incurred for items 1, 2, 3, 6, 7, 8 and 9; that for item 4, the reimbursement would be made upon the basis of the fair market value of the lands, leases and options, and that for item 5, the transfer would be made upon the basis of the reproduction cost of the wells.

All expenses in connection with item 10 would be absorbed by the promotion fee, which would also be paid from the proceeds of the sale of bonds.

The following summary sets out the estimated cost of these items.

1. Preliminary geological survey .....	\$114,444.00
2. Preliminary engineering survey .....	49,695.00
3. Detailed geological work (one year) .....	78,420.00
4. Cost of lands, leases and options .....	1,721,618.00
5. Cost of drilling wells .....	1,119,499.00
6. Fiscal agent's geological report .....	15,000.00
7. Fiscal agent's engineering report .....	15,000.00
8. Fiscal agent's legal report .....	25,000.00
9. Organization expenses .....	141,769.00
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• Total .....	\$3,280,445.00

Items 10 and 11 are omitted for the reason that they will be considered independently with reference to expenses included in the promotion fee.

[fol. 7933] Value of the Services of the Originating Group  
in Connection With the Following Items:

(a) Negotiating for, or closing gas sales contracts:

Before final commitments could be secured for permanent financing, the fiscal agents would require of the originating group some definite assurance of a market for the sale of gas. Negotiations would be conducted with the major industries in the market area, and as has been assumed in the analysis of the cost of business development (see Going

Value) a certain proportion of the ultimate industrial consumers now served by Lone Star Gas Company would be attached immediately upon the completion of the lines to the market centers.

The acquisition of this business would be of value not only as an aid in the financing of the company, but also as a factor in the reduction of the cost of subsequent business development.

(b) Negotiating with the owners of distributing properties and the prospective builders of distributing plants:

Lone Star Gas Company as of January 1, 1933 served approximately 270 individual cities and towns as a wholesaler of natural gas for local distribution to approximately 240,000 individual domestic consumers.

Under the basic assumption that Lone Star Gas Company would be non-existent at the initiation of the project, not more than ten cities in this group would have artificial distributing plants, and these plants measured by the present customer saturation, would be sub-normally developed as natural gas markets.

The cost of constructing the physical plant of Lone Star Gas Company as of January 1, 1933 could not be underwritten unless assurance could be given that the larger markets having artificial plants would be converted and extended, and that distribution plants would be constructed in the smaller cities and towns where no plants existed at the time of the promotion.

In the subsequent calculations of the cost of Interest During Construction (see Interest During Construction), it has been assumed that the actual construction of the physical property of Lone Star Gas Company could be completed within a three year period. In the subsequent calculation of the cost of Business Development (see cost of Business Development), it has been assumed that concurrent with the construction of the physical property of Lone Star Gas Company there would be an extension of mains in the cities having artificial gas service and a construction of plants in the smaller cities in order that service could be begun promptly upon the completion of the pipe line system. These assumptions materially reduce the total reproduction cost estimate of the property in that the highly important items of the cost of Interest During Construction,



and the cost of Business Development are proportionately reduced.

The period of construction and the situation in reference to the ready availability of the domestic market as [fol. 7935] summed in this estimate could be predicated only upon the primary assumption that the originating group had successfully concluded preliminary negotiations for the extension of existing plants and the construction of new plants during the development period.

The value of this service when measured by its effect upon the marketability of securities, the reduction of Interest During Construction, and the reduction of the period of business development, would be greater than the total amount set out as the promoters' remuneration.

(c) Negotiating with the fiscal agents:

The originating group would conduct and conclude all negotiations with the fiscal agents for permanent financing. In view of the magnitude of the project, these negotiations would extend over a considerable period of time, would require of the originators the exercise of judgment and skill, and would involve numerous group conferences in the financial centers with attendant expenses.

(d) Setting up the financial structure:

The originating group would be jointly responsible with the fiscal agents for the financial structure determined upon. The financial standing of the group, together with their background of experience, would permit the use of a structure favorable to the corporation and the one assumed as a basis for this estimate.

[fol. 7936] (e) Organizing the corporation and placing it in readiness to do business:

The originating group would be jointly responsible with the fiscal agents for the corporate organization, preparation of mortgages, indentures, and other similar details. This work would require numerous group conferences with attendant expenses.

The originating group would be largely responsible for the selection of all executive officers who would be installed upon the perfection of corporate organization. The type

of personnel assumed for the originating group would permit the securing of the character of executives now in charge of the operations of Lone Star Gas Company and correspondingly reduce the probability of executive turnover or improvident management during the construction period.

#### The Extent of the Participation of the Originating Group in Permanent Financing:

It has been assumed that the most advantageous financial structure would consist of an issue of bonds for 50% of the total requirements, an issue of preferred stock for 25% of the requirements, and the 25% remaining provided for by the issuance of common shares. It was further assumed that together with the common shares issued to them for their expenses during the development period, the value of the capital assets transferred to the corporation and their promotion fee, the originating group would assume the responsibility for placing all other common shares issued, or otherwise expressed, would provide all equity [fol. 7937] money.

This last assumption would relieve the corporation of all marketing costs that would normally be incurred in disposing of the class of securities carrying the heaviest brokerage charges. The value of the service would also be reflected in the sale price of the senior securities.

#### Expenses of Originating Group Included in Their Remuneration:

Nothing has been included in this estimate for the office expenses, clerical salaries, traveling and other expenses that would be incurred by the individual members of the originating group during the development and organization period.

Each member of the group would require offices and clerical assistants throughout the periods. Numerous conferences between the individuals of the group and between the group and the fiscal agents, together with conferences with prospective consumers and owners of distribution plants, would result in large expenditures for traveling and incidental expenses. All of these items have been included in the promotion fee.

### Fees Normally Expected and Received:

The fees received for recent natural gas promotions afford a check upon the reasonableness of the amount included in this estimate.

It is obvious that no precise appraisal can be made of the value of the character of the services outlined in the foregoing analysis. Consideration must be given to the effect of the various assumptions upon the overall cost of the project as subsequently developed. It would be irrational to assume that the originating group possessed certain qualifications and rendered certain valuable services [fols. 7938-7939] that would entitle them to substantial remuneration and then fail to give effect to these qualifications and services in the subsequent development, and estimates of the general undistributed costs that would be incurred in the reproduction of Lone Star Gas Company as of January 1, 1933.

In this estimate of these elements of cost in reproduction, consideration has been given to these factors and the value of the promotional services has been reflected in the various overhead charges. This is particularly true in reference to Interest During Construction, cost of marketing securities, and the cost of Business Development.

It is estimated that the minimum fee to the originating group for promotional services in the reproduction of Lone Star Gas Company as of January 1, 1933—under the assumptions outlined in the foregoing analysis—would be not less than \$2,000,000.00.

This estimate gives no consideration to any loss or gain that might accrue through the transfer to the corporation at their fair market value the proportionate part of the gas reserves of Lone Star Gas Company assumed to be transferred by the originating group at the date of incorporation. Included in this estimate are the expenses of the originating group not specifically included in the items of expense set out in the summary of Preliminary Development and Organization Costs, and interest charges accrued upon the out-of-pocket expenses of the originating group during the development period.

## [fols. 7940-7941] Undistributed General Cost

## General Summary

Executive Section .....	\$503,487
Legal Section .....	490,576
Accounting Section .....	192,320
Treasury Section .....	97,509
Land Section .....	277,138
Geological Section .....	255,929
Purchasing Section .....	530,636
Other General Cost .....	201,574
Engineering Cost .....	1,127,661
Supervision Cost .....	414,493
Taxes During Construction .....	173,818
Interest During Construction .....	4,975,933
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	\$9,241,074

## [fol. 7942] Undistributed General Costs

The undistributed general costs that would be incurred in the reproduction of the physical property of Lone Star Gas Company as of January 1, 1933, from the date of incorporation to the time when such charges would not be attributable to the construction of the physical entity would be as follows:

1. Administration and Legal Costs.
2. General Engineering Costs.
3. General Supervision of Construction Costs.
4. Taxes on Non-operative Property (exclusive of general office building and general office land, and parking lot).
5. Interest on expenditures attributable to non-operative property.

The estimated costs that would be involved in each of the foregoing accounts have been developed in detail in the subsequent sections of the appraisal.

Before proceeding to these detailed analyses, consideration will be given to certain general factors that would have a direct bearing upon these costs.

### Pre-Construction and Construction Periods:

In the estimate of each of the Undistributed General Costs, the element of time is a most important factor. It is the multiplier that must be applied to the salaried personnel engaged in the various activities of the several departments, and it is a function of the cost of interest and of taxes applied to non-operative property and accrued during the period of construction.

In this estimate, a period of three and one half years from the date of the incorporation of the company has been [fol. 7943] adopted as representing the minimum time that would be required in which to economically reproduce the physical property of Lone Star Gas Company as of January 1, 1933, and of this three and one-half year period, six months has been allocated to the necessary work that would be done in connection with the various preliminary steps that would precede construction of the plant. In the case of the general engineering work, a period of six months after the completion of the physical property would be required for the preparation of the final engineering records. In the case of the general stores organization, a period of six months following the completion of the construction of the physical property would be required for the purpose of preparing final inventories, furnishing completion reports, and accounting for the final disposition of surplus material attributable to construction. In connection with the accounting, or records section, at least six months subsequent to the completion of the physical property would be required for the checking and closing of construction records. With these exceptions, all estimated expenditures for Undistributed General Costs would be incurred within the three and one half year period adopted.

The duration of the pre-construction and construction periods has been determined after a careful study of the amount and character of the work that would be involved in the various preliminary steps that would precede and be essential to the initiation of construction, the amount of work that would be done in construction, and the sequence in which the individual units of physical property would be begun and completed.

In this connection, consideration has necessarily been [fol. 7944] given to the fact that the development of the estimated direct cost of reproducing the physical property



has been based upon the assumption that the company would organize its own construction forces and complete the plant without the intermediary services of a general engineering contractor. This basic assumption, in reference to the development of the unit costs of physical property which results in the elimination of contractor's profit and the use of contractor's equipment and personnel, would create the necessity for the prompt organization immediately following the incorporation of the company, of the various departments that would be responsible for the preparation of engineering plans, the securing of rights-of-way, the purchase and delivery of materials, the construction of the plant, and the keeping of records and accounts.

Consideration has also been given to the fact that during the progress of construction certain portions of the completed plant would pass into partial operation, and such charges to constructions as would be reduced by reason of this fact have been properly adjusted in order to give effect to such operations.

#### General Organization Plan:

The general organization plan that has been adopted as the basis for the development of the personnel, and the responsibilities of the executives and department heads who would be engaged in the administrative and other functions of management during the pre-construction and construction periods, follows very closely the general organization plan of Lone Star Gas Company as a going concern jointly engaged in construction and operation. Certain sections that are strictly operative in their functions have been eliminated. In addition to specific eliminations, the relations of some of the department heads have been modified to conform to the requirements of an organization in construction only. With these exceptions, the general organization plan of Lone Star Gas Company has been strictly adhered to in the estimate of Undistributed General Costs.

Figure (1) is the general organization chart covering the executive groups and the departmental heads included under Administration and Legal Costs, General Engineering Costs and General Supervision of Construction Costs. This general chart provides the basis for the detailed organization charts that have been used in the subsequent analyses of the personnel that would be required for the various sections.

### General Methods Employed:

In the subsequent development of the estimates of Administration and Legal Costs, General Engineering Costs, and General Supervision of Construction Costs that would be incurred in the reproduction of Lone Star Gas Company as of January 1, 1933, the actual executives of the company, and the actual departmental heads, as of that date, have been used as the basis for the estimate. This is also true of the subordinate personnel. The number of men that would be engaged in the work required of the various sections, and the respective duties of each man have been determined after a careful study of each section with reference to its personnel and the duties of the various employees during the periods in which Lone Star Gas Company was engaged in its largest construction programs. These analyses were made in conjunction with the department heads having responsible charge of the sections during these construction periods.

[fol. 7946] During the years 1927 and 1929, Lone Star Gas Company (in conjunction with Community Natural Gas Company) was engaged in construction programs that involved expenditures in excess of \$10,000,000.00 during each of these years, and the experience of the company afforded a rational basis for estimate.

In fixing salaries, consideration has been given to the fact that a trained organization, at least with reference to department heads and key men, would be required from the date of incorporation. In order to secure such an organization, trained men would necessarily be taken from the personnels of other companies engaged in similar activities. Men employed under these conditions expect and receive salaries in excess of those that they formerly received.

In several of the departments engaged in the reproduction of Lone Star Gas Company, a substantial part of the personnel would be temporarily employed. This is particularly true with reference to the engineering and construction sections, and the salaries of the employees who would not be retained as a part of the operating organization have been adjusted to meet this condition.



The trained organization of Lone Star Gas Company as of January 1, 1933 is an element of value that should be considered and appraised as a part of the present worth of the company. A separate allowance has been made to provide for this element of value.

Consideration must therefore be given to the cost of securing this organization if the present value of the company is to be reflected in the appraisal.

The number of men engaged in the work of the various [fols. 7947-7948] departments, would, in some cases, vary as the successive steps of the work progressed, and as the constituent elements of property passed from construction into operation. During the construction period there would be a division of responsibility on the part of some of the executive and administrative groups.

These changes, and the division of responsibility between operation and construction during the construction period would require adjustments in personnel, and a rational allocation of general costs proportionate to the relative amount of time required for operation and construction on the part of those jointly engaged.

In order that these adjustments and allocations might be made with relative accuracy, a careful study has been made of the rate at which necessary personnel would be required, the rate at which the construction would proceed, and the rate at which expenditures would be made from the date of incorporation to the date of the completion of the physical property. A study has also been made of the time at which the various sections of the completed system would pass into partial operation during the construction period. The results of these studies have been set out in connection with the development of the Cost of Interest During Construction.

## [fol. 7949] Administration and Legal Costs

## General Summary

Executive Section .....	\$503,487
Legal Section .....	490,576
Accounting Section .....	192,320
Treasury Section .....	97,509
Land Section .....	277,138
Geological Section .....	255,929
Purchasing Section:	
Purchasing Division .....	\$217,918
General Stores .....	225,690
Stationery Division .....	61,482
Traffic Division .....	25,546
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	530,636
	<hr/>
Total .....	\$2,347,595

## [fol. 7950] Administration and Legal Costs

## Definition:

As used in this estimate of the reproduction cost of the property and business of Lone Star Gas Company, Administration and Legal Costs are intended to cover the salaries and expenses of executive officers from the date of incorporation until such time as the property under construction would pass into operation. Also the salaries and expenses of the department heads, clerks and other employees, office rent or its equivalent cost, depreciation on equipment; expenses and supplies in connection with the accounting, purchasing, general stores, traffic, land and lease, and geological departments; also all expenditures that would be incurred by the legal department, including the pay and expenses of counsel, solicitors and attorneys, their clerks and assistants, and the expenses of their offices; the cost of printing briefs, legal forms, payments to arbitrators, witness and notarial fees, and other like costs.

In connection with the determination of the construction period, it was estimated that corporate organization would be perfected at least six months prior to the beginning of actual construction. In view of the magnitude of the undertaking, and of the various steps that would necessarily be

taken before the construction program could be entered upon, six months would be the minimum time that would be required to prepare final plans; assemble an administrative, engineering, and construction organization; purchase and secure the delivery of equipment and the materials of construction.

In the detailed analyses of the various sections that [fols. 7951-7952] would be engaged in the work classified under the general head Administration and Legal Costs, care has been taken, wherever possible, to include only the personnel that would be required for construction only.

In each case where there would be a division of responsibility arising from the fact that a portion of the property would become operative during the construction period, proper effect has been given to this fact.

[fol. 7953] Administration and Legal Costs

Executive Section

General Summary

Salaries .....	\$397,925
Office Furniture and Fixtures (Depreciation Only) .....	5,341
Stationery and Supplies .....	5,610
Transportation (Cost of Operation plus Depreciation) .....	19,173
Traveling Expenses .....	57,750
Communication Expense .....	17,688
Total .....	<u>\$503,487</u>

[fol. 7954] Executive Section

Summary of Cost

Pre-Construction Period:

Salaries .....	\$72,350
Office Furniture and Fixtures (Depreciation Only) .....	971
Stationery and Supplies .....	1,020
Transportation (Cost of Operation plus Depreciation) .....	3,486
Traveling Expenses .....	10,500
Communication Expense .....	3,216
Total .....	<u><u>\$91,543</u></u>

## Summary of Cost—Continued

## Construction Period—First Year:

Salaries .....	\$144,700
Office Furniture and Fixtures (Depreciation Only) .....	1,942
Stationery and Supplies .....	2,040
Transportation (Cost of Operation plus Depreciation) .....	6,972
Traveling Expenses .....	21,000
Communication Expense .....	6,432
<b>Total</b> .....	<b>\$183,086</b>

## Construction Period—Second Year:

## Construction Period—Second Year:

Salaries .....	\$108,525
Office Furniture and Fixtures (Depreciation Only) .....	1,457
Stationery and Supplies .....	1,530
Transportation (Cost of Operation plus depreciation) .....	5,229
Traveling Expenses .....	15,750
Communication Expense .....	4,824
<b>Total</b> .....	<b>\$137,315</b>

## Construction Period—Third Year:

Salaries .....	\$72,350
Office Furniture and Fixtures (Depreciation Only) .....	971
Stationery and Supplies .....	1,020
Transportation (Cost of Operation plus depreciation) .....	3,486
Traveling Expense .....	10,500
Communication Expense .....	3,216
<b>Total</b> .....	<b>\$91,543</b>

[fol. 7955]. Executive Section

## General Organization Plan and Duties of the Section:

The Executive Section is that section of the general organization that would be responsible for the general policies

of the company, the procuring of funds for the construction of the property, the negotiating and making of contracts and the employment of department heads. Through the individual executives, the section would also be responsible for the work of all other sections of the general organization that would be engaged in the reproduction of the property and business of Lone Star Gas Company.

The Executive Section would necessarily be engaged and would begin to function immediately upon the completion of the corporate organization, and would continue to direct all of the affairs of the company throughout the pre-construction, construction, and post construction periods.

In conformity with the general plan of this appraisal, the development of the personnel and the duties of the executive section has been based upon the existing personnel of the company, and the duties that have been ascribed in the estimate to the various individual executives conform to the actual duties and responsibilities of these officers in connection with their work when Lone Star Gas Company has been engaged in its major construction programs.

It has been assumed that the individual members of the executive section would become the operating officers of the company upon the completion of its construction program. For this reason, these individual officers would become responsible for the operations of the company as its completed units passed from construction to operation during [fol. 7956] the construction period. Account has been taken of the fact in the allocation of the costs of the section, and the proportionate part of the cost attributable to operation during construction has been deducted from the estimate.

#### Personnel Analysis:

The following enumeration set out the duties and contacts of the individual officers and employees included in the Executive Section.

#### President of the Company:

Under the organization plan adopted, the general duties of the president, insofar as his duties would relate to the construction of the property and the development of its business, would be as follows:

1. He would select and engage the services of the executive personnel.



2. He would generally direct all other executive officers.
3. He would determine all matters of general policy.
4. He would conduct all negotiations with fiscal agents.
5. He would conduct all negotiations with owners of distributing plants in cities proposed to be served with natural gas.
6. He would conduct all negotiations with utility operations concerning the construction of distribution plants in cities and towns adjacent to the proposed system, but in which no distribution facilities existed at the time of the initiation of the project.
7. He would conduct all negotiations with large prospective purchasers of natural gas for industrial use.
8. He would make contact with and conduct any necessary negotiations with governmental and regulatory authorities.
9. He would check and approve all estimates of cash requirements for construction, drilling of wells, purchase of leases, and other expenses that would be incident to the reproduction of Lone Star Gas Company.
10. He would check and approve monthly and quarterly progress reports made to the fiscal agents, the directors and the stockholders.

[fol. 7957] Assistant to the President:

The general duties of the assistant to the president would be as follows:

1. He would secure information from all departmental heads, and prepare progress reports and special reports to the fiscal agents, the board of directors, and the stockholders.
2. He would keep the president advised on all matters pertaining to construction, drilling of wells, acquisition of leases, budgets, and other matters of similar nature.
3. He would familiarize himself with and advise the president and other executives relative to progress made by other utility companies in extending their plants and preparing them for the use of natural gas, and in constructing new

plants for the reception of service coincident with the completion of the pipe line system.

4. He would assist the president in presenting statistical and other information to the fiscal agents, the board of directors, and the stockholders.

5. He would see that all matters of general policy determined upon by the president were properly carried out.

#### Vice President and General Manager:

The duties of the vice president and general manager would be as follows:

1. He would interview and be responsible for the employment of the following departmental heads:

- a. General superintendent of construction.
- b. Chief engineer.
- c. Chief geologist.
- d. Chief land and lease agent.
- e. General purchasing agent.

2. He would be responsible for the general design of the system, the standards of construction employed and the standards of materials used in construction.

3. He would be responsible for the purchase of the major items of equipment.

4. He would be responsible for the final selection of prospective gas acreage to be acquired.

5. He would be responsible for the final location of wells to be drilled.

6. He would be responsible for the making of gas purchase contracts.

7. He would be finally responsible for the cost and quality of all constructions.

[fol. 7958] 8. He would be responsible for the preparation of reports on progress of construction, acreage acquired, wells drilled, cash requirements for future construction and other matters pertaining to construction.

9. He would consult in reference to all rate schedules for the sale of domestic gas and prepare schedules for the sale of gas for special and industrial purposes.



### Vice President and General Counsel:

The general duties of the vice president and general counsel would be as follows:

1. He would organize and be responsible for the legal department.
2. He would be responsible for the selection and retention of all local counsel.
3. He would be responsible for the preparation of all contracts, and the conduct of all litigation arising from the progress of construction, and the development of business.
4. He would be responsible for all corporate matters and all legal questions growing out of the mortgage and its provisions.
5. He would advise all other executives relative to the conduct of their work with reference to its legal phases.
6. He would be finally responsible for all titles.
7. He would be responsible for the final settlement of all claims.
8. He would assist the president in all negotiations with governmental agencies, and be responsible for all franchises.
9. He would have general supervision of the Land and Lease and Rights-of-Way Departments.

### Secretary and Treasurer:

The general duties of the secretary and treasurer would be as follows:

1. He would interview and be responsible for the employment of:
  - a. Comptroller.
  - b. Assistant treasurer.
  - c. Assistant secretary.
2. He would be responsible for the adoption of a classification of accounts for the company.
3. He would be responsible for the initiation of the general accounting system.

4. He would be responsible for the initiation of the tax and insurance records.

[fol. 7959] 5. He would be responsible for the selection of insurance companies that would handle all classes of company insurance.

6. He would be responsible for the proper contacts between the company and tax authorities.

7. He would be responsible for the preparation and filing of all corporate reports required by County, State and Federal authorities.

8. He would be responsible for all cash receipts and disbursements.

9. He would be responsible for stock records and transfers, and the listing of stock on exchange.

#### Assistant Secretary:

The duties of the assistant-secretary would be as follows:

1. He would be directly responsible for the initiation and handling of all insurance and tax records.

2. He would be directly responsible for the preparation and filing of all required corporate reports with County and State.

3. He would be directly responsible for the proper contacts between the company and tax authorities.

4. He would be directly responsible for all settlements with insurance companies covering insurable losses suffered by the company.

5. He would assist the secretary and treasurer in all secretarial duties.

#### Chief Clerk to Vice President and General Manager:

1. He would be directly responsible for the handling of all reports and other office duties in connection with the general duties of the vice president and general manager.

In addition to general officers and assistants whose duties have been specifically enumerated, five secretaries and an information clerk would be required to properly handle the office details of the Executive Section.

### Schedule of Salaries:

The schedule of salaries adopted has been based upon the actual salaries of the executive officers of Lone Star Gas Company when in construction and operation, together with a reasonable allowance for the premium that would necessarily be paid in order to secure the type of personnel re-[fol. 7960] quired from other similar organizations and certain allowances in specific instances for the increase in responsibilities that the wholesale reproduction of Lone Star Gas Company would impose.

Position	Per Annum
President .....	\$40,000
Vice President and General Manager .....	30,000
Vice President and General Counsel .....	20,000
Secretary and Treasurer .....	18,000
Assistant to the President .....	12,000
Assistant Secretary .....	6,000
Chief Clerk to Vice President and General Manager .....	4,000
Secretary to the President .....	3,600
Secretary to the Vice President and General Manager .....	2,700
Secretary to the Vice President and General Counsel .....	2,400
Secretary to the Secretary and Treasurer .....	2,100
Secretary to the Assistant to the President .....	2,400
Information Clerk .....	1,500
<b>Total</b> .....	<b>\$144,700</b>

In the distribution of annual charges for salaries and other expenses attributable to the Executive Section an allocation has been made upon the assumption that all expenses would be chargeable to construction during the pre-construction period, and the first construction year, that seventy five per cent of all expenses would be chargeable to construction during the second construction year, and that fifty per cent of all expenses would be chargeable to construction during the final construction year.

This allocation of salaries and expenses fairly reflects the proportionate amount of time that the members of the executive group would devote to construction and operation during the construction period.

## Office Furniture and Fixtures:

The following summary sets out the reproduction cost as of January 1, 1933, of the office furniture and fixtures of the [fol. 7961] personnel of the Executive Section that would be engaged during the pre-construction and construction periods. As an expense during these periods, depreciation at an annual rate of eight per cent per annum has been allocated to construction and operation as previously outlined.

## Summary

Office of Assistant to President .....	\$1,066
Office of Secretary to Assistant to President .....	641
President's office .....	4,873
Office of Secretary to President .....	1,479
Vice President's office .....	2,374
Office of Assistant to Vice President .....	1,071
Office of Secretary to Vice President .....	641
Information Clerk's office .....	963
Ante room .....	526
Office of Secretary to Secretary and Treasurer .....	948
Secretary and Treasurer's office .....	1,601
Office of Assistant Secretary .....	1,324
Office of Secretary to General Counsel .....	601
Office of Vice President and General Counsel .....	2,078
Vault equipment .....	962
Carpet for all offices .....	3,131
<b>Total .....</b>	<b>\$24,279</b>

## Stationery and Office Supplies:

The estimate of stationery and office supplies is based upon the per man per annum consumption applied to the purchasing and stores department.

It has been estimated that the lower rate of consumption would be balanced by the higher quality of stationery and supplies used by the company executives. The estimated expense by periods is as follows:

Pre-construction Period .....	\$1,020
First Construction Year .....	2,040
Second Construction Year .....	2,040
Third Construction Year .....	2,040
<b>Total .....</b>	<b>\$7,140</b>

## [fol. 7962] Transportation Expenses:

It has been estimated that two Packard Sedans would be required for the Executive Section, one for the exclusive use of the vice president and general manager, and one for the general use of resident members of the Executive Section.

The estimated annual cost of transportation expenses is as follows:

1 Packard Sedan—Cost \$2970—Depreciation at 25-per cent .....	\$742
1 Packard Sedan—Cost \$2970—Depreciation at 33 per cent .....	990
1 Packard Sedan—12 000 miles at 7 cents per mile .....	840
1 Packard Sedan—25 000 miles at 8 cents per mile .....	2,000
2 Chauffeurs at \$100 per month each .....	2,400
<b>Total</b> .....	<b>\$6,972</b>

The estimated cost of transportation by periods is as follows:

Pre-construction Period .....	\$3,484
First Construction Year .....	6,972
Second Construction Year .....	6,972
Third Construction Year .....	6,972
<b>Total</b> .....	<b>\$24,400</b>

## Traveling Expenses:

The traveling expenses of the individuals of the Executive Section has been estimated as follows:

Officer	Per Month	Per Annum
President .....	\$750	\$9,000
Vice President and General Manager .....	300	3,600
Vice President and General Counsel .....	200	2,400
Secretary and Treasurer .....	150	1,800
Assistant to the President .....	200	2,400
Assistant Secretary .....	150	1,800
<b>Total</b> .....		<b>\$21,000</b>



The estimated cost of traveling by periods is as follows:

Pre-construction Period .....	\$10,500
First Construction Year .....	21,000
Second Construction Year .....	21,000
Third Construction Year .....	21,000
<b>Total</b> .....	<b>\$73,500</b>

[fols. 7963-7964] Communication Expense:

The expense of telegrams, tolls and telephones has been based upon the actual experience of the Executive Section taken in connection with the fact that the present company system would be incorporated during a substantial part of the construction period.

	Per Month	Per Annum
Telegrams and Tolls .....	\$450	\$5,400
Telephones 13 at \$6.60 each .....	86	1,032
<b>Total</b> .....		<b>\$6,432</b>

The estimated cost of communication by periods is as follows:

Pre-construction Period .....	\$3,216
First Construction Year .....	6,432
Second Construction Year .....	6,432
Third Construction Year .....	6,432
<b>Total</b> .....	<b>\$22,512</b>

[fol. 7965] Administration and Legal Costs

#### Legal Section

#### General Summary

Salaries .....	\$138,120
Retainers and Fees .....	97,600
Court Costs and Expenses .....	179,879
Stationery, Office Supplies and Annual Service .....	7,499
Transportation Expense .....	13,368
Traveling Expenses .....	22,950
Communication Expenses .....	24,826
Office Furniture and Fixtures and Library (Depreciation Only) .....	6,334
<b>Total</b> .....	<b>\$490,576</b>

[fol. 7966]

Legal Section  
Summary of Costs

Pre-Construction Period:

Salaries .....	\$18,510
Retainers and Fees .....	
Court Costs and Expenses .....	22,195
Stationery, Office Supplies and Annual Service ..	1,084
Transportation (Cost of Operation Plus Deprecia- tion) .....	1,671
Traveling Expenses .....	2,850
Communication Expenses .....	2,765
Office Furniture and Fixtures and Library (De- preciation Only) .....	845
Total .....	<u>\$49,920</u>

Construction Period—First Year:

Salaries .....	\$41,220
Retainers and Fees .....	26,600
Court Costs and Expenses .....	45,163
Stationery, Office Supplies and Annual Service ..	2,133
Transportation (Cost of Operation Plus Deprecia- tion) .....	3,342
Traveling Expenses .....	6,900
Communication Expenses .....	6,950
Office Furniture and Fixtures and Library (De- preciation Only) .....	1,689
Total .....	<u>\$133,997</u>

Construction Period—Second Year:

Salaries .....	\$36,795
Retainers and Fees .....	28,400
Court Costs and Expenses .....	45,163
Stationery, Office Supplies and Annual Service ..	1,965
Transportation (Cost of Operation Plus Deprecia- tion) .....	3,342
Traveling Expenses .....	6,150
Communication Expenses .....	6,950
Office Furniture and Fixtures and Library (De- preciation Only) .....	1,689
Total .....	<u>\$130,454</u>



## [fol. 7967] Construction Period—Third Year:

Salaries .....	\$32,370
Retainers and Fees .....	28,400
Court Costs and Expenses .....	45,163
Stationery, Office Supplies and Annual Service .....	1,797
Transportation (Cost of Operation Plus Depreciation) .....	3,342
Traveling Expenses .....	5,400
Communication Expenses .....	6,950
Office Furniture and Fixtures and Library (Depreciation Only) .....	1,689
<b>Total .....</b>	<b>\$125,111</b>

## Post-Construction Period:

Salaries .....	\$9,225
Retainers and Fees .....	14,200
Court Costs and Expenses .....	22,195
Stationery, Office Supplies and Annual Service .....	520
Transportation (Cost of Operation Plus Depreciation) .....	1,671
Traveling Expenses .....	1,650
Communication Expenses .....	1,211
Office Furniture and Fixtures and Library (Depreciation Only) .....	422
<b>Total .....</b>	<b>\$51,094</b>

[fol. 7968]

## Legal Section

## General Organization Plan and Duties of the Section:

The Legal Section is that part of the general organization that, in the reproduction of the property and business of Lone Star Gas Company, would be responsible for the examination, approval and the drawing up in proper form of all contracts, charters, franchises, easements, deeds, abstracts of title, insurance policies, notes, bonds, mortgages, liens, releases and government reports of all kinds and character as required by the local state and National Governments. This Section would also render such legal advice, opinions and assistance as would be necessary and useful to other Sections of the general organization, and would be responsible for the prosecution and defense of all

suits and litigation for and in behalf of the company during the pre-construction, construction, and post-construction periods that would grow out of the construction of the property and the development of business.

The Legal Section would begin to function as a part of the general organization immediately upon the completion of corporate organization, and would continue to function as a part of the organization required for the reproduction of the property and business of the company throughout the pre-construction and construction periods, and a part of the personnel of the Section would be engaged in work attributable to construction during the post-construction period.

The development of the personnel and duties of the legal Section as set out in this estimate has been based upon the existing personnel of the company, and the duties that have been ascribed to the various individuals of the Section [fol. 7969] conform to their actual duties and responsibilities in connection with their work when Lone Star Gas Company has been engaged in its major construction and expansion program.

In conformity with the general organization plan of the company, and the organization plan adopted as the basis for this estimate, the Legal Section would be under the general supervision of the vice-president and chief counsel, and under the direct supervision of the Section head, who for identification will be called first attorney.

The first attorney and the second attorney would direct the work of the Section, and handle all general matters; the junior attorneys would be assigned to specific duties as will be developed in the personnel analysis.

#### Personnel Analysis:

Upon the completion of corporate organization, the first attorney would be engaged, and with the co-operation and under the general direction of the general counsel, would immediately begin the organization of the Legal Section. He would assist in the selection of the personnel of the Section, the employing of other attorneys, secretaries and stenographers, and the selection and purchase of law books and the necessary equipment of the Section. Together with the second attorney, he would be responsible for the handling of any suits and litigation occurring during the

pre-construction period, and he would assist the general counsel in an advisory capacity to all other sections functioning during this time. This work would involve the writing of opinions, contracts, leases, and the preparation of forms to be used by the various departments.

[fol. 7970] Three assistant attorneys would be immediately engaged for specific work in connection with the acquisition of leases. Three months prior to the beginning of construction two additional attorneys would be engaged for specific work in connection with the acquisition of rights-of-way, easements, damages growing out of construction, and similar matters. Beginning with the construction period, the seven attorneys as above set out, together with the necessary secretaries and clerks, would constitute the personnel of the Legal Section during the three year construction period.

For at least six months after the completion of construction, at least four of the attorneys would continue to function in connection with litigation that would be carried over from the construction period. A great number of condemnation cases would be pending on appeal in the County Court from the award of the Commissioners at the end of the construction period. There would also be pending a great number of right-of-way damage claims, and suits arising from the work and actions of the company during construction. This work, would of necessity, require the attention of the Legal Section in co-operation with the Claim Division of the Land Section. There would also be a certain amount of unfinished work in connection with curative data, titles, contracts, easements and leases.

As the company passed from construction to partial operation during the construction period, there would be a normal division of responsibility on the part of the first and second attorneys between construction and operation. For this reason, there has been *al* allocation of their salaries, and of the salaries of their secretaries upon the assumption that one fourth of their time would be given [fol. 7971] to operating matters during the second construction year, and one half during the final construction year.

#### First Attorney:

1. The first attorney, under the general supervision of the vice-president and general counsel, would be respon-

sible for the carrying out of the details of the organization of the Legal Section, and the selection of its personnel.

2. He would direct and assign the work and duties of all employees of the Section.

3. He would be responsible to the general counsel for the preparation and defense of all suits and litigation arising out of the construction of property and the development of the business of the company.

4. He would prepare and give legal advice and opinions to all other Sections and employees of the company on legal questions arising in connection with the construction of the property, and the development of the business of the company.

5. He would prepare and present briefs and agreements in the trial and appeal of the suits and litigation of the company.

6. He would prepare and examine contracts, franchises, easements, deeds, abstracts of title, notes, mortgages, bonds, and the various regulations, ordinances and laws applicable to the company in local, County and State Governments where it would operate.

7. He would co-operate with the Land Section in the examination and preparation of titles, leases and contracts.

8. He would co-operate with the Claim Department in investigating and settling claims and suits, and prospective claims against the company growing out of construction and business development.

#### Second Attorney:

The second attorney would assist the first attorney in all matters. He would also be responsible for the direction of the Section during the absence of the first attorney.

In connection with the specific duties ascribed to the first attorney, the second attorney would assist in the preparation [fol. 7972] tion and trial of cases in the State District Courts, and in the Federal District Court, and in the preparation of appeals, including briefs and arguments as would be necessary in the Appellate Courts, including the Court of Civil Appeals, the State Supreme Court, the United States Circuit Court, and the United States Supreme Court; and he would assist in the marshaling of facts, the preparation of pleadings, the arrangement for



witnesses, and the actual trial and hearing of the cases. Such litigation would involve damage suits, injunction suits, royalty suits involving leases, title suits, and various other litigation.

Together with the first attorney, he would make appearances for, and on behalf of, the company before regulatory bodies such as the Railroad Commission of Texas, the Corporation Commission of Oklahoma, the Highway Commission of both Texas and Oklahoma, tax boards, and other State and National Bureaus and Commissions in matters which would involve the rights and functions of the company during the construction of its property, and the development of its business. These duties would require the preparation of petitions, applications and protests, and the securing of permits, grants from the regulatory boards and Commissions.

#### Third and Fourth Attorneys:

It would be necessary for the third and fourth attorneys to devote practically all of their time to the handling of condemnation suits and right-of-way difficulties, which would involve or hinder the progress of the various right-of-way crews, and so affect the progress of all construction.

Their duties in this connection would entail the preparation of condemnation petitions, the interviewing and selection [fol. 7973] of boards of Commissioners, the hearing and trial of the condemnation cases before the Commissioners and the preparation of awards, bonds, easements and right-of-way grants. They would also handle the minor litigation of the company in the Corporation, Justice and County Courts. This work would involve the marshaling of facts, arrangement for witnesses, preparation of arguments and briefs.

The routine work of the third and fourth attorneys would require them to go to various localities where the right-of-way crews would be at work in order to handle the condemnation suits and right-of-way litigation and difficulties which would interfere with the progress of the construction crews. This would require the use of a company automobile by both the third and fourth attorneys.

#### Fifth, Sixth, and Seventh Attorneys:

The fifth, sixth, and seventh attorneys would devote practically all of their time to the examination of abstracts,

titles, and leases. This work would involve the examination of thousands of abstracts of title in view of the assumption that one-half of the mineral leases now owned by Lone Star Gas Company would be acquired during a three and one-half year period. Their work would also involve the examination of abstracts of title of the various regulator and measuring station sites, and all property acquired by the company.

It would also be the duty of the fifth, sixth, and seventh attorneys to handle probate matters and minor litigation involving the clearing of titles to be acquired by the company. It would also be their duty to prepare and examine leases, deeds, contracts, and easements, and to assist the third and fourth attorneys in the handling of the minor litigation of the company.

[fol. 7974] A portion of the time of these attorneys would be required in the various gas fields in which the company holds leases, for the preparation of deeds, easements, leases, affidavits, and other curative data necessary for the clearing and approval of titles to the leases and property acquired by the company. At least one company automobile would be required for the prompt discharge of those duties.

#### Secretaries and Clerk:

During the time that each of the attorneys would be engaged during the pre-construction and construction periods, a secretary would be required to handle the work of each attorney. It would also be necessary to employ a file clerk and librarian.

The secretaries would be continuously engaged in handling the work and correspondence of the various attorneys. They would keep the setting of cases, prepare files, and prepare and furnish file data, take dictation, write inter-office communication, opinions, briefs, contracts, and all forms and character of instruments as directed by the various attorneys. They would be required to keep the files and offices of the individual attorneys, answer phone calls, and assist generally in handling the business of the Section.

The clerk would be responsible for the care of the general files, the arranging of the library and keeping it in proper order, and checking books and periodicals coming into the library. This clerk would also receive and direct all visi-

tors and persons having business with the various individuals of the Section, and would make appointments for them.

#### Local Attorneys on Retainer:

It has been found both economical and generally advisable [fol. 7975] able, in the construction history of Lone Star Gas Company, to retain local counsel at strategic points on the system. Their familiarity with local conditions would be helpful to the company's attorneys. They would be able to handle local matters promptly and in many cases make more favorable adjustment of claims than would otherwise be possible. They would also save the time and expense of company attorneys by removing the necessity for frequent trips to various parts of the system under construction.

Beginning with the first year of the construction program, local attorneys would be retained in the following cities:

	Per Annum
Duncan, Oklahoma	\$600
Durant, Oklahoma	600
Oklahoma City, Oklahoma	1,000
Wichita Falls, Texas	600
Fort Worth, Texas	1,000
Eastland, Texas	600
Abilene, Texas	600
Waco, Texas	600
Corsicana, Texas	600
Greenville, Texas	600
Sherman, Texas	600
Austin, Texas	1,000

These attorneys would be retained as the progress of construction demanded their services.

It would be necessary to pay to the local attorneys fees for such cases or litigation as might be handled by them in their respective Sections. The retainer's fees would simply cover such incidental advice and office work as they would be called upon to do for the company.

In addition to the foregoing retainers, it would be necessary for the company, in the most important cases involving considerable sums of money, to employ other local attorneys residing at the location or point where such litigation [fol. 7976] arises. The matter of compensation to these attorneys would depend upon the amount of litigation



the company might have on which it would be advisable to employ such attorneys. An annual sum of not less than \$20,000 would be required for this purpose.

Schedule of Salaries:

Position	Rate Per Month	Rate Per Annum
First Attorney	\$750	\$9,000
Second Attorney	450	5,400
Third Attorney	275	3,300
Fourth Attorney	275	3,300
Fifth Attorney	225	2,700
Sixth Attorney	225	2,700
Seventh Attorney	225	2,700
First Secretary	150	1,800
Second Secretary	125	1,500
Third Secretary	125	1,500
Fourth Secretary	125	1,500
Fifth Secretary	125	1,500
Sixth Secretary	125	1,500
Seventh Secretary	125	1,500
Clerk	110	1,320

Distribution of Salaries by Periods:

Pre-Construction Period:

First Attorney, Six months at	750	4,500
Second Attorney, Six months at	450	2,700
Third Attorney, Six months at	275	1,650
Fourth Attorney, Six months at	275	1,650
Fifth Attorney, Six months at	225	1,350
Sixth Attorney, Three months at	225	675
Seventh Attorney, Three months at	225	675
First Secretary, Six months at	150	900
Second Secretary, Six months at	125	750
Third Secretary, Six months at	125	750
Fourth Secretary, Six months at	125	750
Fifth Secretary, Six months at	125	750
Sixth Secretary, Three months at	125	375
Seventh Secretary, Three months at	125	375
Clerk, Six months at	110	660

Total		<u>\$20,510</u>
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## Defendant's Exhibit No. 28—Continued

## First Construction Year:

First Attorney .....	\$9,000
Second Attorney .....	5,400
[fol. 7977] Third Attorney .....	3,300
Fourth Attorney .....	3,300
Fifth Attorney .....	2,700
Sixth Attorney .....	2,700
Seventh Attorney .....	2,700
First Secretary .....	1,800
Second Secretary .....	1,500
Third Secretary .....	1,500
Fourth Secretary .....	1,500
Fifth Secretary .....	1,500
Sixth Secretary .....	1,500
Seventh Secretary .....	1,500
Clerk .....	1,320
Total .....	<u>\$41,220</u>

## Second Construction Year:

Total First Construction Year Less:	\$41,220
One Fourth of \$9,000 .....	\$2,250
One Fourth of 5,400 .....	1,350
One Fourth of 1,800 .....	450
One Fourth of 1,500 .....	375
	<u>4,425</u>
Total .....	<u>\$36,795</u>

## Third Construction Year:

Total First Construction Year Less:	\$41,220
One Half of \$9,000 .....	\$4,500
One Half of 5,400 .....	2,700
One Half of 1,800 .....	900
One Half of 1,500 .....	750
	<u>8,850</u>
Total .....	<u>\$32,370</u>

## Defendant's Exhibit No. 28—Continued

## Post-Construction Year:

First Attorney, Three months at .....	\$750	\$2,250
Second Attorney, Three months at .....	450	1,350
Third Attorney, Six months at .....	275	1,650
Fourth Attorney, Six months at .....	275	1,650
First Secretary, Three months at .....	150	450
Second Secretary, Three months at .....	125	375
Third Secretary, Six months at .....	125	750
Fourth Secretary, Six months at .....	125	750
Total .....		<u>\$9,225</u>

## [fol. 7978] Retainers and Fees:

## First Construction Year:

Attorney at Duncan, Oklahoma .....	\$600
Attorney at Oklahoma City, Oklahoma .....	1,000
Attorney at Wichita Falls, Texas .....	600
Attorney at Fort Worth, Texas .....	1,000
Attorney at Eastland, Texas .....	600
Attorney at Abilene, Texas .....	600
Attorney at Waco, Texas .....	600
Attorney at Sherman, Texas .....	600
Attorney at Austin, Texas .....	1,000
Fees .....	20,000
Total .....	<u>\$26,600</u>

## Second Construction Year:

Attorney at Duncan, Oklahoma .....	\$600
Attorney at Durant, Oklahoma .....	600
Attorney at Oklahoma City, Oklahoma .....	1,000
Attorney at Wichita Falls, Texas .....	600
Attorney at Fort Worth, Texas .....	1,000
Attorney at Eastland, Texas .....	600
Attorney at Abilene, Texas .....	600
Attorney at Waco, Texas .....	600
Attorney at Corsicana, Texas .....	600
Attorney at Greenville, Texas .....	600
Attorney at Sherman, Texas .....	600
Attorney at Austin, Texas .....	1,000
Fees .....	20,000
Total .....	<u>\$28,400</u>

Third Construction Year .....

\$28,400

Post-Construction Year .....

\$14,200

### Court Costs and Expenses;

Based upon the experience of Lone Star Gas Company in construction, approximately two hundred suits per annum would grow out of the three-year construction program. These suits would be in addition to those growing out of the condemnation of rights-of-way, the expenses of which have been included as a part of the direct structural costs [fol. 7979] as transmission system right-of-way. These suits would consist of miscellaneous damage suits, injunctions, trespass to try title, royalty suits, lease suits, and other similar cause for litigation.

The experience of the company further indicates that for every two hundred suits filed one hundred would come to trial with approximately twenty-five originating in the Justice Court, twenty-five in the County Courts, and fifty in the State and Federal District Courts. The average cost of these suits has been found to be as follows:

#### Justice Court:

Court Costs .....	\$7.50
Subpoena and Witness Fees .....	35.00
<b>Total .....</b>	<b>\$42.50</b>

#### County Court:

Court Costs .....	\$15.00
Subpoena and Witness Fees .....	45.00
<b>Total .....</b>	<b>\$60.00</b>

#### District Court:

Court Costs .....	\$25.00
Subpoena and Witness Fees .....	100.00
<b>Total .....</b>	<b>\$125.00</b>

Of these suits originating in the Courts designated, it is estimated that fifteen would be appealed from the Justice to the County Court, and of these fifteen appeals, at least five would be subsequently appealed from the County

Courts; that of the cases originating in the County Courts, fifteen would be appealed to the higher Courts; and that of the cases originating in the District Courts, twenty five would be appealed. The estimated cost of these appeals is as follows:

[fol. 7980] Justice to County Courts:

Preparation of Transcript and Record for Appeal	\$15.00
Cost of Trial in County Courts .....	60.00
Total .....	<u>\$75.00</u>

County Courts to Appellate Courts:

Statement of Facts and Transcript .....	\$150.00
Court of Civil Appeals Costs .....	75.00
Printing Briefs .....	125.00
Copy of Opinion .....	10.00
Bond Cost .....	10.00
Incidental Charges .....	10.00
Total .....	<u>\$380.00</u>

District Court of Appeals:

Statement of Fact and Transcript .....	\$200.00
Appellate Court Costs .....	100.00
Printing Briefs .....	200.00
Copy of Opinion .....	20.00
Bond Cost .....	50.00
Incidental Charges and Costs .....	25.00
Total .....	<u>\$595.00</u>

None of the foregoing estimates of cost include any allowance for expenses of counsel, stenographic services, and legal fees. •

## Defendant's Exhibit No. 28—Continued

## Distribution of Court Costs and Expenses by Periods:

## Pre-Construction Period:

Justices Court Cases.....	12 at \$42.50	\$510
County Court Cases.....	12 at 60.00	720
District Court Cases.....	25 at 380.00	9,500
Appeals Justice to County Courts..	7 at 75.00	525
Appeals County to Higher Courts..	10 at 380.00	3,800
Appeals from District Courts.....	12 at 595.00	7,140
Total .....		<u>\$22,195</u>

## First Construction Year:

Justice Court Cases.....	25 at \$42.50	\$1,063
County Court Cases.....	25 at 60.00	1,500
District Court Cases.....	50 at 380.00	19,000
Appeals Justice to County Courts..	15 at 75.00	1,125
[fol. 7981] Appeals County to Higher Courts .....	20 at 380.00	7,600
Appeals from District Court.....	25 at 595.00	14,875
Total .....		<u>\$45,163</u>

Second Construction Year..... \$45,163

Third Construction Year..... \$45,163

Post-Construction Period..... \$22,195

Stationery, Office Supplies, and Annual Service by  
Periods—Annual Service Details:

A. L. R. Annual digest Service.....	\$5.
Oklahoma Digest and Statutes Service for 1933..	10
Federal and Supreme Court Blue Book.....	10
Shepard's Texas Citations, Annual.....	10
Shepard's Southwestern Citations, Annual.....	12
U. S. Digest Pocket Service per Year.....	2
Vernon's Accumulative Texas Statutes Pocket Serv- ice .....	18
Shepard's Oklahoma Citations.....	45
Texas Syllabi .....	7



## Defendant's Exhibit No. 28—Continued

Ruling Case Law Pocket Service .....	\$10
National Reporter Blue Book .....	10
Texas and Southwestern Reporter Blue Book .....	10
Pacific Reporter Blue Book .....	10
Pamphlet Supps. to U. S. Code, (Compact Edition)	
Year to December 31, 1933 .....	3
Ray's Advance Session Laws of Texas, 5 Volumes	15
Texas Law Review .....	4
Harvard Law Review .....	5
Public Utility Reports .....	15

Total .....	<u>\$201</u>
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## Pre-Construction Period:

Annual Service .....	\$100
Stationery and Office Supplies .....	984

Total .....	<u>\$1,084</u>
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## [fol. 7982] First Construction Year:

Annual Service .....	\$210
Stationery and Office Supplies .....	1,932

Total .....	<u>\$2,133</u>
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## Second Construction Year:

Annual Service .....	\$201
Stationery and Office Supplies .....	1,764

Total .....	<u>\$1,965</u>
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## Third Construction Year:

Annual Service .....	\$201
Stationery and Office Supplies .....	1,596

Total .....	<u>\$1,797</u>
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## Defendant's Exhibit No. 28—Continued

## Post-Construction Period:

Annual Service .....	\$100
Stationery and Supplies .....	420
Total .....	<u>\$520</u>

## Transportation Expense by Periods:

## Equipment:

Three Standard Buicks Cost \$3,675.  
Operation 4.5 cents per Mile.

## Pre-Construction Period:

Depreciation at \$76.00 per month for Six Months .....	\$456
Operation 27,000 Miles at 4.5 cents per mile .....	1,215
Total .....	<u>\$1,671</u>

## First Construction Year:

Depreciation at \$76.00 per month for Twelve months .....	\$912
Operation 54,000 Miles at 4.5 cents per Mile .....	2,430
Total .....	<u>\$3,342</u>

[fol. 7983] Second Construction Year .....

\$3,342

Third Construction Year .....

\$3,342

Post-Construction Period .....

\$1,671

## Defendant's Exhibit No. 28—Continued

## Traveling Expenses by Periods:

## Pre-Construction Period:

First Attorney,	\$100 per month six months	\$600
Second Attorney,	100 per month six months	600
Third Attorney,	75 per month six months	450
Fourth Attorney,	75 per month six months	450
Fifth Attorney,	75 per month six months	450
Sixth Attorney,	50 per month three months	150
Seventh Attorney,	50 per month three months	150
Total .....		<u>\$2,850</u>

## First Construction Year:

First Attorney,	\$150 per month 12 months	\$1,800
Second Attorney,	100 per month 12 months	1,200
Third Attorney,	75 per month 12 months	900
Fourth Attorney,	75 per month 12 months	900
Fifth Attorney,	75 per month 12 months	900
Sixth Attorney,	50 per month 12 months	600
Seventh Attorney,	50 per month 12 months	600
Total .....		<u>\$6,900</u>

## Second Construction Year:

First Attorney,	\$150 per month 9 months	\$1,350
Second Attorney,	100 per month 9 months	900
Third Attorney,	75 per month 12 months	900
Fourth Attorney,	75 per month 12 months	900
Fifth Attorney,	75 per month 12 months	900
Sixth Attorney,	50 per month 12 months	600
Seventh Attorney,	50 per month 12 months	600
Total .....		<u>\$6,150</u>

## Defendant's Exhibit No. 28—Continued

## [fol. 7984] Third Construction Year:

First Attorney,	\$150 per month 6 months	\$900
Second Attorney,	100 per month 6 months	600
Third Attorney,	75 per month 12 months	900
Fourth Attorney,	75 per month 12 months	900
Fifth Attorney,	75 per month 12 months	900
Sixth Attorney,	50 per month 12 months	600
Seventh Attorney,	50 per month 12 months	600
Total		<u>\$5,400</u>

## Post-Construction Period:

First Attorney,	\$150 per month 3 months	\$450
Second Attorney,	100 per month 3 months	300
Third Attorney,	75 per month 6 months	450
Fourth Attorney,	75 per month 6 months	450
Total		<u>\$1,650</u>

## Communication Expenses by Periods:

## Pre-Construction Period:

Eleven Phones, \$6.60 per month 6 months	\$436
Four Phones, 6.60 per month 3 months	79
Telegrams and Tolls \$15.00 per day for 150 days	2,250
Total	<u>\$2,765</u>

## First Construction Year:

Twelve Phones, \$6.60 per month 12 months	\$950
Telegrams and Tolls \$20.00 per day for 300 days	6,000
Total	<u>\$6,950</u>

Second Construction Year \$6,950

Third Construction Year \$6,950

## Post-Construction Period:

Eight Phones, \$6.60 per month 4 months	\$211
Telegrams and Tolls, \$10.00 per day for 100 days	1,000
Total	<u>\$1,211</u>

## Defendant's Exhibit No. 28—Continued

## [fols. 7985-7986] Floor Space Requirements:

The Legal Section would require one floor of the general office structure of Lone Star Gas Company.

## Office Furniture and Fixtures as per Detailed Inventory:

Offices of Seven Attorneys .....	\$1,857
Offices of Two Secretaries .....	999
Office of Stenographic Section of Legal Department	
Accommodating Five Stenographers .....	1,231
Library, Office of Librarian and File Clerk .....	12,802
Total .....	<u>\$16,889</u>

## [fol. 7987] Administration and Legal Costs

## Accounting Section

## General Summary

Salaries .....	\$159,461
Stationery and Office Supplies .....	11,788
Transportation (Depreciation Plus Operation) .....	4,152
Traveling Expenses .....	6,465
Communication Expense .....	6,873
Office Furniture and Fixtures (Depreciation Only) .....	3,581
Total .....	<u>\$192,320</u>

## [fol. 7988] Accounting Section

## Summary of Costs

## Pre-Construction Period:

Salaries .....	\$12,810
Stationery and Office Supplies .....	672
Transportation (Cost of Operation Plus Depreciation) .....	324
Traveling Expenses .....	195
Communication Expense .....	758
Office Furniture and Fixtures (Depreciation Only)* .....	168
Total .....	<u><u>\$14,927</u></u>

\* One fourth of the Equipment for Six Months.

2689

## Defendant's Exhibit No. 28—Continued

## Construction Period—First Year:

Salaries .....	\$55,920
Stationery and Office Supplies .....	4,200
Transportation (Cost of Operation Plus Depreciation) .....	1,128
Traveling Expenses .....	1,890
Communication Expense .....	1,975
Office Furniture and Fixtures (Depreciation Only) .....	1,347
Total .....	<u>\$66,460</u>

## Construction Period—Second Year:

Salaries .....	\$45,015
Stationery and Office Supplies .....	3,402
Transportation (Cost of Operation Plus Depreciation) .....	1,128
Traveling Expenses .....	1,890
Communication Expense .....	1,975
Office Furniture and Fixtures (Depreciation Only)* .....	1,116
Total .....	<u>\$54,526</u>

\* Depreciation on 75 per cent of all Furniture and Fixtures except Plant and Equipment Division.

## Construction Period—Third Year:

Salaries .....	\$34,110
[fols. 7989-7990] Stationery and Office Supplies .....	2,604
Transportation (Cost of Operation Plus Depreciation) .....	1,128
Traveling Expenses .....	1,890
Communication Expense .....	1,975
Office Furniture and Fixtures (Depreciation Only)* .....	866
Total .....	<u>\$42,573</u>

\* Depreciation on 50 per cent of all Furniture and Fixtures except Plant and Equipment Division.

## Defendant's Exhibit No. 28—Continued

## Post-Construction Period:

Salaries .....	\$11,606
Stationery and Office Supplies .....	910
Transportation (Cost of Operation Plus Depreciation) .....	444
Traveling Expenses .....	600
Communication Expense .....	190
Office Furniture and Fixtures (Depreciation Only) * .....	84
<b>Total .....</b>	<b>\$13,834</b>

\* One Fourth of the Equipment for Three Months.

\* \* \* \* \*

[fol. 7991]

## Accounting Section

## General Organization Plan and Duties of the Section:

In general the duties of the Accounting Section used in this estimate of the reproduction cost of the property and business of Lone Star Gas Company as of January 1, 1933, conform to the duties of any well organized accounting department of the general organization of a company engaged in an extensive construction program. Specifically the duties herein assigned to the Section as a whole, and to the various individuals who would be engaged in accounting work, conform to the duties of the Section and the responsibilities of the individuals when Lone Star Gas Company has been engaged in extensive construction programs.

In the reproduction of the property and business of the company, it would be the duty of this Section to keep proper records of all monies disbursed, and to properly distribute and allocate all charges as prescribed by the Standard Classification of Accounts. It would also be its function to make certain that the proper approved authorizations would be attached to and made a part of each voucher disbursing funds. It would also be the duty of the Section to prepare regular and special reports covering expenditures, property additions, monies advanced, and other kindred matters. After provision had been made for proper supervision, the Section would be divided into three general di-



visions—The General Book Division, the Distribution Division, and the Plant and Equipment Division. The general duties of these divisions are briefly outlined in the following summary:

#### General Book Division:

The General Book Division would keep the general books [fol. 7992] of the company. It would keep all subsidiary records other than those pertaining to property. It would prepare monthly financial reports, and special reports. It would check and approve vouchers passing through the Section. It would do all comptometer and typing work for the Section, and file all vouchers, transfers, expense accounts, and all other miscellaneous papers.

#### Distribution Division:

The Distribution Section would distribute all charges to various job orders as provided for in the Standard Classification of Accounts. It would also be the duty of this division to check all vouchers in order that they might be properly supported with copies of orders, material recovery reports, or other evidences of the delivery of the material covered by the various invoices.

#### Plant and Equipment Division:

The Plant and Equipment Division would be responsible for the posting of all charges to various job orders covering units of construction. It would check all charges made to job orders against engineering records, prepare all data in support of vouchers clearing construction, and charges to permanent investment. It would also post and keep current all permanent investment records covering all classes of property.

#### Personnel Analysis:

##### Comptroller:

The comptroller would be in responsible charge of the work of the Accounting Section. He would be directly responsible to the secretary and treasurer, and would be employed immediately upon the completion of corporate organization. During the pre-construction period his duties would be as follows:



[fol. 7993] 1. He would secure data on and make recommendations concerning the adoption of a standard classification of accounts for the company.

2. He would secure data on and make recommendations concerning the adoption of a modern and approved accounting system.

3. He would confer with all Section and Division heads with reference to the types of reports to be prepared by them for use by the Section and Division heads, the responsible executives, and the Accounting Section.

4. He would prepare the personnel scheme of the Accounting Section, and then confer with the personnel manager relative to the engagement of employees with proper qualifications. He would also interview prospects secured by the personnel manager, and approve or disapprove the various individuals recommended.

5. He would be responsible for the preparation of all accounting forms, and he would also assist other Sections in the preparation and selection of forms for their specific needs.

6. He would confer with the assistant secretary, the Tax Division, and other sections and divisions relative to the kind of information that would be required from the Accounting Section for the proper preparation of the various forms of governmental reports.

7. He would generally supervise the work performed by the Accounting Section.

During the construction period, the general duties of the comptroller would be similar to those above outlined with an increase in responsibility in connection with the direction of the Section due to the increase in personnel that would take place upon the beginning of actual construction.

It has been assumed that during the first construction year, the entire time of the comptroller would be devoted to construction records and other classes of work pertaining wholly to construction. During the second construction year, it has been assumed that a proper division of his time and responsibilities would be seventy-five per cent to construction and twenty-five per cent to operation. [fol. 7994] During the third construction year, it has been assumed

that his time and responsibilities would be equally divided between construction and operation. During the first year in which the company would be wholly operative, or the post-construction period, it has been assumed that twenty-five per cent of his time and responsibilities would be devoted to the work of his Section that would grow out of the construction of the plant.

#### General Auditor:

The general auditor would be directly responsible to the comptroller, and would be employed immediately after the perfection of corporate organization. His general duties during the pre-construction period would be as follows:

1. He would assist the comptroller in all matters pertaining to the organization of the Accounting Section, and to its operation after organization.
2. He would work out all details in connection with the preparation of accounting forms, and check all proofs received from printers and stationers.
3. He would be directly responsible for the supervision of the work of the Section.
4. He would be responsible for the final accounting approval of all vouchers prepared by or passed through the Accounting Section.

The duties of the general auditor during the construction and post-construction periods would conform to those above outlined. There would be a reduction in the amount of time required for the preparation and approval of forms, and a heavy increase in the proportionate amount of time required for the supervision of the Section, the approval of vouchers and other routines. The division of the general auditor's time between construction and operation after the end of [fol. 7995] the first construction year conforms to that set out under the discussion of the duties of the comptroller.

#### Traveling Auditor:

The traveling auditor would be directly responsible to and work under the supervision of both the comptroller and the general auditor. The position of traveling auditor would not be filled until the beginning of actual construction,

however, it would be necessary that he be retained for a period of six months following the completion of construction, and during this time his salary and expenses would be charged to construction. His duties during the entire period of his employment would be as follows:.

1. He would check monthly all working funds in possession of the superintendents of the Construction Section.
2. We would act as contact man between the Accounting Section and the field construction personnel.
3. He would advise and instruct all persons having working funds with reference to the proper methods of preparing disbursement reports and other matters of a similar nature.
4. He would prepare a report showing the result of each individual audit made in the field.
5. He would follow up, under the direction of the comptroller or general auditor, each recommendation in his audit reports for the purpose of seeing that these recommendations were followed.

#### Secretary to the Comptroller and General Auditor:

The secretary to the comptroller and general auditor would handle all correspondence of their offices, receive and distribute all incoming and outgoing mail, and perform other secretarial duties. He would also type audit reports prepared by the traveling auditor, and assist in the handling of the correspondence of the chief clerks of the Section.

#### [fol. 7996] General Book Division:

##### Chief Clerk:

The chief clerk of the General Book Division would be directly responsible to the general auditor, and he would be employed immediately upon the completion of corporate organization. During the pre-construction period his duties would be as follows:

1. He would check and approve all vouchers passing through the Accounting Section.
2. He would be responsible for the compilation of all special reports pertaining to general matters, or all reports

other than detailed reports covering property or property additions.

3. He would prepare all vouchers covering storehouse transfers, automobile time sheets, prepaid rentals, and other similar matter.

4. He would prepare all monthly financial reports.

Following the pre-construction period, and during the construction period, the chief clerk would be unable to perform all of the duties set out, and his work would be limited to the following:

1. He would check and approve all vouchers passing through the Accounting Section.

2. He would be responsible for the compilation of all special reports other than those pertaining to property and property additions.

3. He would supervise generally the work of the General Book Section.

#### Assistant Chief Clerk:

The position of assistant chief clerk would not be filled until the beginning of actual construction, therefore no charges have been included for the expenses of this office during the pre-construction period. His specific duties would be as follows:

1. He would assist the chief clerk in all matters delegated to him.

[fol. 7997] 2. He would prepare all monthly financial reports under the direction of the chief clerk.

3. He would assist in the preparation of all special reports.

4. He would assist in the performance of all miscellaneous duties arising from work of the General Book Division.

#### General Clerk:

The position of general clerk would not be filled until the beginning of actual construction, therefore no charges have been included for the expenses of this office, that is, during the pre-construction period. His particular duties would be as follows:

1. He would assist, when necessary, in the preparation of special reports.

2. He would be directly responsible for the preparation of miscellaneous vouchers covering storehouse transfers, automobile time sheets, teaming tickets, prepaid insurance, prepaid rentals, and all other miscellaneous vouchers.

3. He would assist in miscellaneous work that would be required of the General Book Division.

#### Posting Machine Operator :

The posting machine operators would be directly responsible to the chief clerk. He would be employed immediately after the perfection of corporate organization. The duties of this operator during the pre-construction and construction periods would be as follows:

1. He would post all charges to the general ledger as well as charges to the subsidiary ledgers from all vouchers passing through the Section.

2. He would take off monthly trial balances from the general ledger and subsidiary ledgers, and transfer them to the chief clerk or assistant chief clerk for use in the preparation of monthly financial reports.

3. Assist in any other miscellaneous work of the Division.

#### [fol. 7998] Comptometer Operator :

During the pre-construction period, the service of one comptometer operator would be required. With the beginning of actual construction an additional operator would be employed. Both operators would be required during the entire construction period. The duties of the comptometer operators would be as follows:

1. They would check and compute the accuracy of all extensions in all statements prepared by the Division.

2. They would check all storehouse material transfers.

3. They would check all financial statements prepared by the Division, and do all other verification that would be necessary in connection with the operation of the entire Accounting Section.



### Typists:

One typist would be employed upon the completion of corporate organization; and one additional typist would be employed upon the beginning of construction. Both typists would be required during the entire construction period. The duties of these typists would be as follows:

1. They would type all miscellaneous vouchers originating in the Section.
2. They would type all special reports prepared by the Section.
3. They would type all financial reports prepared by the Section.
4. They would type all construction reports prepared by the Plant and Equipment Division.
5. They would do all miscellaneous typing that would be necessary in the operation of the Accounting Section.

### Voucher Clerk:

The voucher clerk would be employed at the beginning of [fol. 7999] the first construction year. His duties during the construction period would be as follows:

1. After all vouchers had been checked by the chief clerk and passed to the general auditor for further check and approval, they would be returned to the voucher clerk who would place the voucher number thereon. He would also detach the copy of the voucher check after the number had been placed thereon, and transfer it to the filing clerk.
2. He would be responsible for the delivery of all cash vouchers to the Treasury Section for payment.
3. He would assist all other clerks in the General Book Division.

### File Clerk:

The file clerk would be employed at the beginning of the first construction year, and his duties during the construction period would be as follows:

1. He would file alphabetically copies of all voucher checks passing through the Section

2. He would assort in numerical order and file storehouse transfers and job tickets.

3. He would file all vouchers upon their return from the Treasury Section.

4. He would file all expense accounts in alphabetical order upon their return from the Payroll Division.

5. He would do all miscellaneous filing required in connection with the work of the Accounting Section.

#### Office Boy:

An office boy would be required by the Section at the beginning of the construction period. His duties would be as follows:

1. He would run errands for the Section.

2. He would assist in the operation of Ditto or mimeograph machines in the preparation of all monthly or special reports.

3. He would perform such miscellaneous duties as would be required by the Section.

#### [fol. 8000] Distribution Division:

##### Chief Distribution Clerk:

It would be necessary to engage the chief distribution clerk immediately upon the organization of the Section. During the pre-construction period, the chief clerk would be able to handle all work pertaining to the distribution of charges. At the beginning of construction, the personnel of the Division would be increased as hereinafter set out, and all of the time of the chief clerk would be required for the checking and approval of distribution on all vouchers passing through the Section.

##### Distribution Clerks:

Immediately upon the beginning of construction, two distribution clerks would be required. These clerks would be continuously engaged throughout the construction period, and for a six months period following the completion of construction. The duties of the distribution clerks would be as follows:

1. They would make distribution of charges on all vouchers passing through the Section.



2. They would make distribution on all storehouse material transfers.

3. They would make distribution of all expense accounts.

4. They would make distribution of all automobile time sheets.

5. They would make distribution of charges on all miscellaneous vouchers including pre-paid insurance, rentals, and other vouchers of similar character.

#### Freight and Express Distribution Clerks:

Two distribution clerks whose duties would be confined to the proper distribution of all charges for freight and express would be engaged at the beginning of the construction [fol. 8001] period. Transportation charges would apply to all materials entering into the construction of the system, and the details handled by these clerks would be voluminous. They would make distribution of all freight, express, and truck line charges. In order to make proper distribution of these charges, it would be necessary for the clerks to locate original invoices, or transfers covering the materials upon which the transportation charges would apply.

#### Plant and Equipment Division:

##### Chief Construction Accountant:

This position would be filled immediately upon the beginning of construction, and the work of the division would require the retention of the chief construction accountant for a six months period following the completion of construction. His duties during the construction and post-construction periods would be as follows:

1. He would supervise the posting to the individual work orders all charges for labor, materials, and miscellaneous items.

2. He would supervise the compiling of all construction costs, the checking against engineer's records and daily performance sheets of construction groups for the purpose of verifying all charges made to the various job orders.

3. He would supervise the compilation of supporting data for vouchers clearing construction accounts, and charges to

the permanent investment accounts as prescribed by the Standard Classification of Accounts.

#### Construction Accountants:

Two construction accountants would be employed at the beginning of construction. These accountants would be retained for a six months period following the completion of construction. Their duties during the construction and [fol. 8002] post-construction periods would be as follows:

1. They would post to the individual work order number all charges for labor, materials, and miscellaneous items.
2. They would compile all construction costs, check against engineer's records, and daily performance sheets of construction gangs in order to verify all charges made to the various job orders.
3. They would compile supporting data for vouchers clearing construction account, and charges to the permanent investment accounts, classification of same as prescribed by the Standard Classification of Accounts.
4. They would prepare construction completion reports by work order numbers which would show the actual cost of construction. These costs could be compared with estimated costs.

#### Posting Machine Operators:

Two posting machine operators would be employed at the beginning of construction. These operators would be retained for a six months period following the completion of construction. Their duties during the construction and post-construction periods would be as follows:

1. They would post all charges from all vouchers, both cash and journal, to the classified account as prescribed by the Standard Classification of Accounts to the work order numbers covering construction projects.
2. They would prepare trial balances of the work order ledgers monthly, which would show general information on each work order covering the amount of expenditure authorized, the amount expended during the month, the amount expended to date, total money expended, and the balance under-expended or over-expended.
3. They would assist in the preparation of any special construction reports.

## Defendant's Exhibit No. 28—Continued

Schedule of Salaries:		Rate per	Rate per
General:		Month	Annun
Comptroller.....		\$750	\$ 9,000
[fol. 8003]			
General Auditor.....		400	4,800
Traveling Auditor.....		200	2,400
Secretary.....		150	1,800
General Book Division:			
Chief Clerk.....		250	3,000
Assistant Chief Clerk.....		200	2,400
General Clerk.....		175	2,100
Posting Machine Operators.....		125	1,500
Comptometer Operators.....		125	1,500
Typists.....		110	1,320
Voucher Clerk.....		100	1,200
File Clerk.....		80	960
Office Boy.....		60	720
Distribution Division:			
Chief Clerk.....		225	2,700
Distribution Clerks.....		175	2,100
Freight and Express Distribution Clerks.....		150	1,800
Plant and Equipment Division:			
Chief Clerk.....		225	2,700
Construction Accountants.....		175	2,100
Posting Machine Operators.....		125	1,500
Distribution of Salaries by Periods—Pre-Construction:			
Comptroller.....	Six months at	750	4,500
General Auditor.....	Six months at	400	2,400
Secretary.....	Six months at	150	900
Total.....			<u>\$ 7,800</u>
General Book Division:			
Chief Clerk.....	Six months at	250	1,500
Posting Machine Operator.....	Six months at	125	750
Comptometer Operator.....	Six months at	125	750
Typist.....	Six months at	110	660
Total.....			<u>\$ 3,660</u>
Distribution Division:			
Chief Clerk.....	Six months at	225	1,350
Total.....			<u>\$ 1,350</u>
[fol. 8004]			
Distribution of Salaries by Periods—First Construction Year:			
General:			
Comptroller.....			\$ 9,000
General Auditor.....			4,800
Traveling Auditor.....			2,400
Secretary.....			1,800
Total.....			<u>\$18,000</u>

## Defendant's Exhibit No. 28—Continued

	Rate per Month	Rate per Annum
General Book Division:		
Chief Clerk.....		\$ 3,000
Assistant Chief Clerk.....		2,400
General Clerk.....		2,100
Posting Machine Operator.....		1,500
Comptometer Operator.....		1,500
Comptometer Operator.....		1,500
Typist.....		1,320
Typist.....		1,320
Voucher Clerk.....		1,200
File Clerk.....		960
Office Boy.....		720
Total.....		<u>\$17,520</u>
Distribution Division:		
Chief Clerk.....		2,700
Distribution Clerk.....		2,100
Distribution Clerk.....		2,100
Freight and Express Clerk.....		1,800
Freight and Express Clerk.....		1,800
Total.....		<u>\$10,500</u>
Plant and Equipment Division:		
Chief Clerk.....		2,700
Construction Accountant.....		2,100
Construction Accountant.....		2,100
Posting Machine Operator.....		1,500
Posting Machine Operator.....		1,500
Total.....		<u>\$ 9,900</u>

[fol. 8005]

## Distribution of Salaries by Periods—Second Construction Year

General:			
Comptroller.....	Nine months at.....	\$750	\$6,750
General Auditor.....	Nine months at.....	400	3,600
Traveling Auditor.....	Twelve months at.....	200	2,400
Secretary.....	Nine months at.....	150	1,350
Total.....			<u>\$14,100</u>
General Book Division:			
Chief Clerk.....	Nine months at.....	250	2,250
Assistant Chief Clerk.....	Nine months at.....	200	1,800
General Clerk.....	Nine months at.....	175	1,575
Posting Machine Operator.....	Nine months at.....	125	1,125
Comptometer Operator.....	Nine months at.....	125	1,125
Comptometer Operator.....	Nine months at.....	125	1,125
Typist.....	Nine months at.....	110	990
Typist.....	Nine months at.....	110	990
Voucher Clerk.....	Nine months at.....	100	900
File Clerk.....	Nine months at.....	80	720
Office Boy.....	Nine months at.....	60	540
Total.....			<u>\$13,140</u>

## Defendant's Exhibit No. 28—Continued

Distribution Division:		Rate per Month	Rate per Annum
Chief Clerk.....	Nine months at.....	\$225	\$2,025
Distribution Clerk.....	Nine months at.....	175	1,575
Distribution Clerk.....	Nine months at.....	175	1,575
Freight and Express Clerk.....	Nine months at.....	150	1,350
Freight and Express Clerk.....	Nine months at.....	150	1,350
Total.....			<u>\$7,875</u>

Plant and Equipment Division:			
Chief Clerk.....			\$2,700
Construction Accountant.....			2,100
Construction Accountant.....			2,100
Posting Machine Operator.....			1,500
Posting Machine Operator.....			1,500
Total.....			<u>\$9,900</u>

## Distribution of Salaries by Periods—Third Construction Year

[fol. 8600] General:

Comptroller.....	Six months at.....	\$750	\$4,500
General Auditor.....	Six months at.....	400	2,400
Traveling Auditor.....	Twelve months at.....	200	2,400
Secretary.....	Six months at.....	150	900
Total.....			<u>\$10,200</u>

General Book Division:			
Chief Clerk.....	Six months at.....	250	1,500
Assistant Chief Clerk.....	Six months at.....	200	1,200
General Clerk.....	Six months at.....	175	1,050
Posting Machine Operator.....	Six months at.....	125	750
Comptometer Operator.....	Six months at.....	125	750
Comptometer Operator.....	Six months at.....	125	750
Typist.....	Six months at.....	110	660
Typist.....	Six months at.....	110	660
Voucher Clerk.....	Six months at.....	100	600
File Clerk.....	Six months at.....	80	480
Office Boy.....	Six months at.....	60	360
Total.....			<u>\$8,760</u>

Distribution Division:			
Chief Clerk.....	Six months at.....	225	1,350
Distribution Clerk.....	Six months at.....	175	1,050
Distribution Clerk.....	Six months at.....	175	1,050
Freight and Express Clerk.....	Six months at.....	150	900
Freight and Express Clerk.....	Six months at.....	150	900
Total.....			<u>\$5,250</u>

Plant and Equipment Division:			
Chief Clerk.....			\$2,700
Construction Accountant.....			2,100
Construction Accountant.....			2,100
Posting Machine Operator.....			1,500
Posting Machine Operator.....			1,500
Total.....			<u>\$9,900</u>

## Defendant's Exhibit No. 28—Continued

## Distribution of Salaries by Periods—Post-Construction Period

General:		Rate Per Month	Rate Per Annum
Comptroller.....	1.5 months at.....	\$750	\$1,125
General Auditor.....	1.5 months at.....	400	600
[fol. 8007] Traveling Auditor.....	Six months at.....	\$200	\$1,200
Secretary.....	1.5 months at.....	150	225
Total.....			<u>\$3,150</u>

## General Book Division:

Chief Clerk.....	1.5 months at.....	250	375
Assistant Chief Clerk.....	1.5 months at.....	200	300
General Clerk.....	1.5 months at.....	175	263
Posting Machine Operator.....	1.5 months at.....	125	188
Comptometer Operator.....	1.5 months at.....	125	188
Comptometer Operator.....	1.5 months at.....	125	188
Typist.....	1.5 months at.....	110	165
Typist.....	1.5 months at.....	110	165
Voucher Clerk.....	1.5 months at.....	100	150
File Clerk.....	1.5 months at.....	80	120
Office Boy.....	1.5 months at.....	60	90
Total.....			<u>\$2,192</u>

## Distribution Division:

Chief Clerk.....	1.5 months at.....	225	338
Distribution Clerk.....	1.5 months at.....	175	263
Distribution Clerk.....	1.5 months at.....	175	263
Freight and Express Clerk.....	1.5 months at.....	150	225
Freight and Express Clerk.....	1.5 months at.....	150	225
Total.....			<u>\$1,314</u>

## Plant and Equipment Division:

Chief Clerk.....	Six months at.....	225	1,350
Construction Accountant.....	Six months at.....	175	1,050
Construction Accountant.....	Six months at.....	175	1,050
Posting Machine Operator.....	Six months at.....	125	750
Posting Machine Operator.....	Six months at.....	125	750
Total.....			<u>\$4,950</u>

## Stationery and Office Supplies by Periods:

## Pre-Construction Period:

General Division.....		252
General Book Division.....		336
Distribution Division.....		84
[fol. 8008] Plant and Equipment Division.....		
Total.....		<u>\$ 672</u>



## Defendant's Exhibit No. 28—Continued

Construction Period—First Year		Rate per Annum
General Division.....		\$672
General Book Division.....		1,848
Distribution Division.....		840
Plant and Equipment Division.....		840
Total.....		<u>\$ 4,200</u>
Construction Period—Second Year		
General Division.....		546
General Book Division.....		1,386
Distribution Division.....		630
Plant and Equipment Division.....		840
Total.....		<u>\$ 3,402</u>
Construction Period—Third Year		
General Division.....		420
General Book Division.....		924
Distribution Division.....		420
Plant and Equipment Division.....		840
Total.....		<u>\$ 2,604</u>
Post-Construction Period		
General Division.....		140
General Book Division.....		238
Distribution Division.....		112
Plant and Equipment Division.....		420
Total.....		<u>\$ 910</u>
* * * * *		
Transportation Expense by Periods		
Equipment—One Chevrolet \$ 580		
Operation 4 cents per mile		
[fol. 8009] Pre-Construction Period		
Depreciation at \$14 per month for six months.....		\$ 84
Operation 6,000 miles at 4 cents per mile.....		240
Total.....		<u>\$ 324</u>
Construction Period—First Year		
Depreciation at \$14 per month for twelve months.....		168
Operation 24,000 miles at 4 cents per mile.....		960
Total.....		<u>\$ 1,128</u>
Construction Period—Second Year		
.....		<u>\$ 1,128</u>
Construction Period—Third Year		
.....		<u>\$ 1,128</u>
Post-Construction Period		
Depreciation at \$14 per month for six months.....		84
Operation 9,000 miles at 4 cents per mile.....		360
Total.....		<u>\$ 444</u>
* * * * *		



## Defendant's Exhibit No. 28—Continued

	Rate Per Annum
<b>Traveling Expenses by Periods</b>	
<b>Pre-Construction Period</b>	
Comptroller..... 30 days at \$6.50 per day	\$ 195
Total.....	<u>\$ 195</u>
<b>Construction Period—First Year</b>	
Comptroller..... 60 days at \$6.50 per day	390
Traveling Auditor..... 300 days at 5.00 per day	1,500
Total.....	<u>\$ 1,890</u>
Construction Period—Second Year.....	<u>\$ 1,890</u>
Construction Period—Third Year.....	<u>\$ 1,890</u>
<b>fol. 8010-8011] Post-Construction Period</b>	
Traveling Auditor..... 120 days at \$5.00 per day	\$ 600
Total.....	<u>\$ 600</u>
<b>Communication Expense by Periods</b>	
<b>Pre-Construction Period</b>	
Four Telephones at \$6.60 per month for six months.....	158
Telegrams and Tolls at \$5.00 per day for 120 days.....	600
Total.....	<u>\$ 758</u>
<b>Construction Period—First Year</b>	
Six Telephones at \$6.60 per month for twelve months.....	475
Telegrams and Tolls at \$5.50 per day for 300 days.....	1,500
Total.....	<u>\$ 1,975</u>
Construction Period—Second Year.....	<u>\$ 1,975</u>
Construction Period—Third Year.....	<u>\$ 1,975</u>
<b>Post-Construction Period</b>	
Four Telephones at \$6.60 per month for 1.5 months.....	40
Telegrams and Tolls at \$5.00 per day for 30 days.....	150
Total.....	<u>\$ 190</u>
<b>Office Furniture and Fixtures as per Detailed Inventory</b>	
Office of Comptroller.....	583
Office of General Auditor.....	300
Office of Traveling Auditor.....	184
Office of Secretary to Comptroller.....	340
Office of General Bookkeeping Section.....	6,942
Office of Distribution Section.....	883
Office of Plant and Equipment Record Section.....	4,235
Total.....	<u>\$13,467</u>

## Defendant's Exhibit No. 28—Continued

## [fol. 8012] Administration and Legal Costs

## Treasury Section

## General Summary

Salaries .....	\$87,925
Stationery and Office Supplies .....	5,527
Communication Expense .....	2,236
Office Furniture and Fixtures (Depreciation Only) .....	1,821
<b>Total .....</b>	<b>\$97,509</b>

## [fols. 8013-8014] Treasury Section

## Summary of Costs

## Pre-Construction Period:

Salaries .....	\$8,550
Stationery and Office Supplies .....	340
Communication Expense .....	308
Office Furniture and Fixtures—Depreciation only .....	133
<b>Total .....</b>	<b>\$9,331</b>

## Construction Period—First Year:

Salaries .....	\$33,420
Stationery and Office Supplies .....	2,184
Communication Expense .....	617
Office Furniture and Fixtures—Depreciation only .....	710
<b>Total .....</b>	<b>\$36,931</b>

## Construction Period—Second Year:

Salaries .....	\$25,065
Stationery and Office Supplies .....	1,638
Communication Expense .....	617
Office Furniture and Fixtures—Depreciation only .....	533
<b>Total .....</b>	<b>\$27,853</b>

## Defendant's Exhibit No. 28—Continued

## Construction Period—Third Year:

Salaries .....	\$16,710
Stationery and Office Supplies .....	1,092
Communication Expense .....	617
Office Furniture and Fixtures—Depreciation only .....	355
<b>Total .....</b>	<b><u>\$18,774</u></b>

## Post-Construction Period:

Salaries .....	\$4,180
Stationery and Office Supplies .....	273
Communication Expense .....	77
Office Furniture and Fixtures—Depreciation only .....	90
<b>Total .....</b>	<b><u>\$4,620</u></b>

[fol. 8015]. Treasury Section

## General Organization Plan and Duties of the Section:

The Treasury Section is that Division of the administrative group that in the reproduction of Lone Star Gas Company, would be directly responsible for the receipt and disbursement of all funds, the preparation of budgets and estimates, the reconciliation of bank balances, and all pay-rolls and expense accounts covering the salaries and expenses of all employees engaged in the construction of the plant.

In conformity with the present organization plan of Lone Star Gas Company, the Treasury Section through the assistant treasurer would be responsible for the selection of the subordinate personnel of all Sections other than those directly responsible for construction.

The Section would be organized immediately upon the completion of corporate organization by the employment of the assistant treasurer who would proceed with the selection of the individual employees of the Section. The organization of the Pay-Roll Division would be completed at a later date, and would not function with its entire personnel until the beginning of actual construction.

In conformity with the adjustments made with reference to the salaries and expenses of the Executive Section due

to the fact that the company would be in partial operation during the construction period, the salaries and expenses of the Treasury Section have been reduced upon the same basis during the second and third construction years.

#### Personnel Analysis:

##### Assistant Treasurer and Personnel Manager:

[fol. 8016] The assistant treasurer would be directly responsible to the secretary and treasurer of the company. In the reproduction of Lone Star Gas Company, his duties would be as follows:

1. He would confer with the various Section heads concerning the qualifications of the personnel necessary to fill positions in their offices.
2. He would secure data on and made recommendations concerning the adoption of a modern and approved treasury and payroll accounting system.
3. He would prepare treasury personnel layout, and proceed with the organization of his Section.
4. He would be responsible for the work of the Treasury Section.
5. He would be responsible for the preparation of all cash budgets and other statements of like nature.
6. He would check and approve all cash vouchers passing through the Section and countersign all checks supported by vouchers.
7. He would be responsible for all collections.
8. He would be directly responsible for the placing of fidelity bonds covering positions of trust both in the general office and in the field.
9. He would be responsible for all bank accounts.
10. He would be responsible for all construction payrolls and expense accounts.

##### Chief Clerk:

The chief clerk of the Treasury Section would be directly responsible to the assistant treasurer. His duties in connection with the work of the Section would be as follows:

1. He would have direct charge of the subordinate personnel and would be directly responsible for the work of the Section during any absence of the assistant treasurer.

2. He would handle all correspondence.

3. He would do all detail work in connection with the preparation of budgets.

[fol. 8017] 4. He would receive and collect all expenditure requisitions submitted by the various Section heads.

5. He would assist the assistant treasurer in all matters arising in connection with the work of the Section.

#### General Clerk:

The duties of the general clerk would be as follows:

1. He would be directly responsible for the reconciliation of all bank balances.

2. He would be ~~directly~~ responsible for the collection of all accounts and notes due the company.

3. He would assist the chief clerk in the analysis of the estimates of cash requirements submitted by the various Section heads, and would also assist in the preparation of budgets.

#### Secretary to the Assistant Treasurer:

The secretary to the assistant treasurer would perform all secretarial duties in connection with the work of the Section. He would also make all appointments for all applicants for positions and assist in the preparation and filing of all application forms submitted by applicants.

#### Typist:

One typist and file clerk would be required for the typing of budgets and reports.

#### Pay Master:

The paymaster would be directly responsible for the payroll Division of the Treasury Section. His specific duties would be as follows:

1. He would finally check and approve all construction payrolls and expense accounts.

2. He would keep a record of the rates of pay for all employees engaged in construction, and the length of service of these employees.

[fol. 8018] 3. He would maintain records for the use of the Income Tax Section of the United States Treasury Department.

#### Assistant Pay Master:

In view of the magnitude of the work that would be required to reproduce the physical property of Lone Star Gas Company within a three year construction period, an assistant pay master would be required to assist the pay master in taking care of the details of the Payroll Division.

#### Machine Operator:

One machine operator would be required to make calculations and extensions for the Payroll Division.

#### Comptometer Operator:

One comptometer operator would be required to make calculations and check additions and extensions for the Payroll Division.

#### Typist:

In addition to the assistant pay master, two payroll and expense account clerks would be required to handle the detail work of the Division. One typist would also be required.

Schedule of Salaries—General Division:		Rate Per Month	Rate Per Annum
Position			
Assistant Treasurer and Office Personnel Officer.....		\$750	\$9,000
Chief Clerk.....		250	3,000
General Clerk.....		200	2,400
Secretary.....		150	1,800
Cash Book Clerk.....		150	1,800
Typist and File Clerk.....		125	1,500
Pay Roll Division:			
Pay Master.....		275	3,300
Assistant Pay Master.....		225	2,700
Payroll and Expense Account Clerks.....		150	1,800
[fol. 8019] Machine Operator.....		125	1,500
Comptometer Operator.....		125	1,500
Typist.....		110	1,320



## Defendant's Exhibit No. 28—Continued

		Rate Per Annum
Distribution of Salaries by Periods—General Division:		
Pre-Construction Period		
Assistant Treasurer and Office Personnel		
Officer.....	Six Months.....	\$4,500
Chief Clerk.....	Six Months.....	1,500
General Clerk.....		
Secretary.....	Six Months.....	900
Cash Book Clerk.....		
Typist.....		
Total.....		<u>\$6,900</u>
Pay Roll Division:		
Pre-Construction Period		
Pay Master.....	Six Months.....	\$1,650
General Division:		
Construction Period—First Year		
Assistant Treasurer and Office Personnel Officer.....		\$9,000
Chief Clerk.....		3,000
General Clerk.....		2,400
Secretary.....		1,800
Cash Book Clerk.....		1,800
Typist.....		1,500
Total.....		<u>\$19,500</u>
Pay Roll Division:		
Construction Period—First Year		
Pay Master.....		\$3,300
Assistant Pay Master.....		2,700
Payroll and Expense Account Clerk.....		1,800
Payroll and Expense Account Clerk.....		1,800
[fol. 8020] Machine Operator.....		\$1,500
Comptometer Operator.....		1,500
Typist.....		1,320
Totals.....		<u>\$13,920</u>
General Division:		
Construction Period—Second Year		
Assistant Treasurer and Office Personnel		
Officer.....	Nine Months.....	\$6,750
Chief Clerk.....	Nine Months.....	2,250
General Clerk.....	Nine Months.....	1,800
Secretary.....	Nine Months.....	1,350
Cash Book Clerk.....	Nine Months.....	1,350
Typist.....	Nine Months.....	1,125
Total.....		<u>\$14,625</u>
Pay Roll Division:		
Construction Period—Second Year		
Pay Master.....	Nine Months.....	\$2,475
Assistant Pay Master.....	Nine Months.....	2,025
Payroll and Expense Account Clerk.....	Nine Months.....	1,350
Payroll and Expense Account Clerk.....	Nine Months.....	1,350
Machine Operator.....	Nine Months.....	1,125
Comptometer Operator.....	Nine Months.....	1,125
Typist.....	Nine Months.....	990
Total.....		<u>\$10,440</u>



## Defendant's Exhibit No. 28—Continued

		Rate Per Annum
General Division:		
Construction Period—Third Year		
Assistant Treasurer and Office Personnel		
Officer.....	Six Months.....	\$4,500
Chief Clerk.....	Six Months.....	1,500
General Clerk.....	Six Months.....	1,200
Secretary.....	Six Months.....	900
Cash Book Clerk.....	Six Months.....	900
Typist.....	Six Months.....	750
Total.....		<u>\$9,750</u>
[fol. 8021] Payroll Division:		
Construction Period—Third Year		
Pay Master.....	Six Months.....	\$1,650
Assistant Pay Master.....	Six Months.....	1,350
Payroll and Expense Account Clerk.....	Six Months.....	900
Payroll and Expense Account Clerk.....	Six Months.....	900
Machine Operator.....	Six Months.....	750
Comptometer Operator.....	Six Months.....	750
Typist.....	Six Months.....	660
Total.....		<u>\$6,960</u>
General Division:		
Post-Construction Period		
Assistant Treasurer and Office Personnel		
Officer.....	1.5 Months.....	\$1,125
Chief Clerk.....	1.5 Months.....	375
General Clerk.....	1.5 Months.....	300
Secretary.....	1.5 Months.....	225
Cash Book Clerk.....	1.5 Months.....	225
Typist.....	1.5 Months.....	188
Total.....		<u>\$2,438</u>
Pay Roll Division:		
Post-Construction Period		
Pay Master.....	1.5 Months.....	\$413
Assistant Pay Master.....	1.5 Months.....	338
Payroll and Expense Account Clerk.....	1.5 Months.....	225
Payroll and Expense Account Clerk.....	1.5 Months.....	225
Machine Operator.....	1.5 Months.....	188
Comptometer Operator.....	1.5 Months.....	188
Typist.....	1.5 Months.....	165
Total.....		<u>\$1,742</u>
Stationery and Office Supplies:		
Pre-Construction Period		
General Division.....		\$250
Payroll Division.....		84
Total.....		<u>\$340</u>

## Defendant's Exhibit No. 28—Continued

	Rate Per Annum
[fol. 8022] Construction Period—First Year	
General Division.....	\$1,008
Payroll Division.....	1,176
Total.....	<u>\$2,184</u>
Construction Period—Second Year	
General Division.....	\$756
Payroll Division.....	882
Total.....	<u>\$1,638</u>
Construction Period—Third Year	
General Division.....	\$504
Payroll Division.....	588
Total.....	<u>\$1,092</u>
Post-Construction Period	
General Division.....	\$126
Payroll Division.....	147
Total.....	<u>\$273</u>

## Transportation Expense:

No company transportation equipment would be required for the Treasury Section in the reproduction of the property and business of Lone Star Gas Company.

## Traveling Expenses:

No traveling expenses would be incurred by any member of the Treasury Section in the reproduction of the property and business of Lone Star Gas Company.

## Communication Expenses by Periods:

## Pre-Construction Period:

Four Telephone- at \$6.60 per month for six months .....	\$158
[fols. 8023-8024] Telegrams and Tolls \$25 per month for six months .....	150
Total .....	<u>\$308</u>

## Defendant's Exhibit No. 28—Continued

## Construction Period—First Year:

Four Telephones at \$6.60 per month for twelve months .....	\$317
Telegrams and Tolls \$25 per month for twelve months .....	300
	<hr/>
Total .....	\$617
	<hr/>

Construction Period—Second Year .....	\$617
	<hr/>

Construction Period—Third Year .....	\$617
	<hr/>

## Post-Construction Period:

Four Telephones at \$6.60 per month for 1.5 months .....	\$40
Telegrams and Tolls \$25 per month for 1.5 months .....	37
	<hr/>
Total .....	\$77

## Office Furniture and Fixtures as Per Detailed Inventory:

Office of Assistant Treasurer .....	\$966
Office of Secretary to Assistant Treasurer .....	569
Office of Chief Clerk .....	189
Office of General Clerk, Cash book Clerk, Typist and File Clerk .....	1,334
Office of Paymaster and Assistant .....	295
Office of Two General Clerks, Moon Hopkins Machine Operator, Calculating Machine Operator, and Typist .....	3,714
	<hr/>
Total .....	\$7,097

## Defendant's Exhibit No. 28—Continued

[fol. 8025] Administration and Legal Costs

## Land Section

## General Summary

Salaries .....	\$184,200
Office Furniture and Fixtures (Depreciation Only) .....	2,107
Stationery and Supplies .....	7,888
Transportation (Cost of Operation plus Depreciation) .....	36,419
Traveling Expenses .....	26,515
Communication Expense .....	20,009
Total .....	<u>\$277,138</u>

[fols. 8026-8027] Summary of Costs

## Pre-Construction Period:

Salaries .....	\$24,900
Office Furniture and Fixtures (Depreciation Only) .....	301
Stationery and Supplies .....	1,270
Transportation (Cost of Operation plus Depreciation) .....	4,943
Traveling Expenses .....	3,595
Communication Expense .....	2,858
Total .....	<u><u>\$37,867</u></u>

## Construction Period—First Year:

Salaries .....	\$53,100
Office Furniture and Fixtures (Depreciation Only) .....	602
Stationery and Supplies .....	2,206
Transportation (Cost of Operation plus Depreciation) .....	10,492
Traveling Expenses .....	7,640
Communication Expense .....	5,717
Total .....	<u><u>\$79,757</u></u>

## Defendant's Exhibit No. 28—Continued

## Construction Period—Second Year:

Salaries .....	\$53,100
Office Furniture and Fixtures (Depreciation Only) .....	602
Stationery and Supplies .....	2,206
Transportation (Cost of Operation plus Depreciation) .....	10,492
Traveling Expenses .....	7,640
Communication Expense .....	5,717
Total .....	<u>\$79,757</u>

## Construction Period—Third Year:

Salaries .....	\$53,100
Office Furniture and Fixtures. (Depreciation only) .....	602
Stationery and Supplies .....	2,206
Transportation (Cost of Operation plus Depreciation) .....	10,492
Traveling Expenses .....	7,640
Communication Expense .....	5,717
Total .....	<u>\$79,757</u>

[fol. 8028]

## General Organization Plan and Duties of the Section:

In the reproduction of Lone Star Gas Company, the Land Section would function without interruption and without change in personnel during the latter part of the Preliminary Development and Organization Period, the Pre-Construction Period and the Construction Period.

Upon the Land Section would devolve all work in connection with the acquisition of:

1. Fee lands.
2. Surface leases.
3. Mineral leases.

4. Gas purchase contracts.
5. Rights-of-way, easements, leases and road grants.
6. All miscellaneous contractual relations in any manner affecting lands, or interest in lands.

The Section would make thorough investigations of all acreage, producing and non-producing, within areas prescribed, and in areas adjacent thereto, and would determine the particular portion of such acreage that should be acquired, and would also determine the relative value of this acreage.

The Section would acquire and maintain records of all drilling operations in the prescribed areas, and in the areas immediately adjacent thereto.

The Section would prepare and put in general use standard forms covering scout reports, purchase orders, drafts, options, escrow agreements, executory contracts, division orders, transfer orders, gas purchase contracts, gas leases, and mineral deeds.

The Section would negotiate through brokers and with [fol. 8029] land owners, for the acquisition of desirable developed and undeveloped acreage.

The Section would secure and compile for the Legal Section abstracts of titles.

The Section would determine the advisability of relinquishing leases where the prospect of profitable development would be doubtful, and would permit expirations that would be preferable to the expense of development.

The Section would, in connection with the Legal Section, see that releases were properly drawn, executed, and delivered to land owners.

The Section would, in connection with the Geological Section, determine the location of test wells.

The Section would initiate, draw, approve records, and handle for payment all vouchers issued in consideration for lands or interest in lands, and for any incidental expense incurred in connection therewith.

The Section would pay all rentals when due, issue vouchers to cover such payments, and maintain proper records thereof.

The Section would provide for and maintain a complete set of ready reference records.



The Section would set a system for and index and file all instruments and other papers affecting lands and matters pertaining thereto.

The Section would prepare and furnish statistics and other informatory communications to the Engineering Supervisor of Construction, Accounting, Geological and Executive Sections upon all matters pertaining to the Land Section.

[fol. 8030] Personnel Analysis:

In order that the duties of the Land Section might be economically performed, actual experience of Lone Star Gas Company has shown that the work systematically classified would be apportioned and placed under the direct supervision of division superintendents. These division superintendents would co-ordinate their work with and would be subject to the general direction of the Section manager, and for that purpose the personnel required would be as outlined in the following analysis.

Section Manager:

Upon the Section manager would devolve the duty of furnishing the contact between the Land Section and the Executive and Legal Sections of the general organization, the general direction of the operations of all divisions of the Land Section, and the final approval of all matters handled within this Section.

Necessarily a man to meet the requirements of this position would combine administrative and executive ability with a general knowledge of the natural gas business; a knowledge of so-called land laws, the rules peculiar to oil and gas mining leases and operations thereunder, and the regulations of the various State and other Commissions of those States in and through which Lone Star Gas Company would seek to produce, transport, purchase, distribute and sell natural gas; the ability to draw all instruments requisite to the proper acquisition of the land properties of the company and all operations incident thereto. He would also be able to make technical interpretations concerning these matters and have experience sufficient to determine their practical significance.



[fol. 8031] Stenographer:

In order to handle properly the writing of instruments and correspondence and miscellaneous files pertinent to the office of the Section manager, there would necessarily be employed a stenographer of sufficient ability and experience to take notes and transcribe accurately and in acceptable form technical and semi-technical instruments and general correspondence necessary to the conduct of the office.

#### Division of Records and Archives:

To this division of the Land Section there would be assigned the duty of installing and maintaining a system of classified ready reference records, indices and cross indices, and files for all instruments affecting the ownership of lands or interest in lands acquired by Lone Star Gas Company as well as all related correspondence.

As the conservation of Lone Star Gas Company's interest in its lands and the compliance with and enforcement of its contractual obligations attached thereto would be dependent upon these records, accuracy and specific knowledge of this phase of the natural gas business would be necessary.

In order to provide for and maintain records to meet these requirements would necessitate the employment of a personnel conversant with and experienced in the functions of the Land Sections of established oil or natural gas companies. Inasmuch as many matters handled by the Land Section would be closely associated with the functions of other Sections of the general organization, particularly the Legal, Engineering, Accounting and Geological Sections, the personnel employed in the Land Section would be required [fol. 8032] to have a general knowledge of the workings of these Sections.

Based upon the actual experience of Lone Star Gas Company, the personnel set out in the following analysis would be required in the Division of Records and Archives during the Pre-Construction and Construction Periods.

#### First Clerk:

To this clerk would be assigned the duty of maintaining general supervision over all other employees in the Divi-

sion, the distribution of work as classified, and the handling of all miscellaneous matters of this Division of the Land Section. Full knowledge of the work of the Division, and previous experience in similar work would be required of the first clerk.

#### Second and Third Clerks—Typists:

Upon these two clerks would devolve the work of abstracting, cross checking, and registering ready reference data from natural gas leases into ledgers provided for the purpose, compiling rental statements, drawing and mailing vouchers in payment of rentals, compiling reports and statistics pertaining to gas leases and the operations thereon. Previous experience in similar work would be required of the second and third clerks.

#### Fourth and Fifth Clerks—Typists:

Upon these two clerks would devolve the duty of abstracting, cross checking, and registering ready reference data from deeds, surface leases, miscellaneous contracts, rights-of-way grants, easements and licenses, construction claims paid, the drawing and mailing of vouchers in payment of rentals, compiling reports and statistics, and maintaining files.

#### [fol. 8033] Sixth Clerk:

The sixth clerk would be required for general utility work in connection with the care of files, blue prints and other records.

#### Stenographer:

The stenographer required for the Division would be experienced, accurate and capable of handling the varied assignments of dictation, forms of instruments, and the statistical data compiled.

#### Lease Division

#### Superintendent:

To the superintendent of this Division would be assigned the direct supervision of field forces employed in investigat-

ing, negotiating for, and acquiring prospective and producing gas properties; the maintenance of maps of properties of prospective and producing gas areas; meeting and dealing with lease brokers; handling correspondence and reports preliminary to the acquirement of leases, and maintaining the proper records thereof; and closing deals for leases, subject to the approval of the Section manager.

The requirements of this position would demand the services of a man with practical experience in field operations; a knowledge of the theory and functions of the Geological Section; a familiarity with and knowledge of the functions of the field forces of the Production Division. A man to meet the requirements could only be obtained from the organization of an established natural gas company.

#### Division Field Men:

Four division field men would be required, one for the West Texas area, one for the Panhandle area, one for Oklahoma, and one for South Central Texas. The division [fol. 8034] field man would report directly to the superintendent of the Lease Division.

#### Stenographer—Clerk:

A stenographer and clerk would necessarily be required in the office of the superintendent of the Lease Division and he should have sufficient experience to properly handle the correspondence, reports and files pertinent to the operations of the office and should be capable in the reading and spotting of maps maintained by the Division.

#### Right of Way and Construction Claims Division

##### Superintendent:

To the superintendent of this Division would be assigned the direct supervision over right-of-way men in the purchase of right-of-ways and settlement of construction damage claims; the acquisition of fee lands and miscellaneous surface leases necessary to the operation of the pipe line or Transportation Section; maintenance of proper records preliminary to the acquisition of rights-of-ways; settlement of damage claims; and the purchase of fee lands and

closing of surface leases, subject to the approval of the manager of the Land Section.

A man to properly fill the requirements of the position must have had practical experience in field work of the sort and a knowledge of the requirement and functions of the Transportation or Pipe Line Section of the system. A man of the caliber required would have to be obtained from the organization of an established natural gas company.

#### Stenographer—Clerk:

To the office of the superintendent of this Division would be assigned a stenographer and clerk of sufficient ability to [fol. 8035] handle the correspondence and files of this Division, render the reports required therefrom, and maintain all records preliminary to the closing of rights-of-ways and surface leases, and the settlement of construction claims.

#### Schedule of Salaries:

Position	Per Annum
Section manager	\$9,000
Secretary	1,800
First Clerk—Division of Records	4,800
Second Clerk—Division of Records	2,400
Third Clerk—Division of Records	1,800
Fourth Clerk—Division of Records	1,800
Fifth Clerk—Division of Records	1,800
Sixth Clerk—Division of Records	1,800
Stenographer—Division of Records	1,500
Superintendent—Lease Division	4,800
West Texas Field Man	3,300
Panhandle Field Man	3,300
Oklahoma Field Man	3,300
South Central Texas Field Man	3,300
Clerk—Lease Division	1,800
Superintendent Right of Way Division	4,800
Clerk Right of Way Division	1,800
Total	<u>\$53,100</u>

## Defendant's Exhibit No. 28—Continued

## Office Furniture and Fixtures as Per Detail Inventory:

## Summary

Office of Sectional Manager of Land Department	\$291
Office of Secretary to Sectional Manager of Land Department	946
Office of Superintendent of Lease Division	232
Office of Secretary to Superintendent of Lease Division	299
Office of Superintendent of Right-of-way Division	137
Office of Secretary to Superintendent of Right-of-way Division	299
Office of Chief Clerk of Land and Lease Department	233
Office of Secretary and Assistants to Chief Clerk of Land and Lease Department	5,091
Total	<u>\$7,528</u>

## [fol. 8036] Stationery and Office Supplies:

Pre-Construction Period	\$1,270
First Construction Year	2,206
Second Construction Year	2,206
Third Construction Year	2,206

## Transportation Expense:

It would be necessary for the superintendent of the Lease Division, the superintendent of the Rights-of-way and Construction Claims Division, and the four Division field men to have automotive equipment for efficient discharge of their duties.

The estimated annual cost of transportation expense is as follows:

2 cars at \$1,250 each—\$2,500 Depreciation at 25 per cent	\$625
4 cars at \$650 each—\$2,600 Depreciation at 33 per cent	867
2 cars 36,000 miles at 5 cents per mile	1,800
4 cars 144,000 miles at 5 cents per mile	7,200
Total	<u>\$10,492</u>

## Defendant's Exhibit No. 28—Continued

## Traveling Expense:

It is estimated that the two superintendents would be in the field at least one-half the time; and that the Division field men would be continuously in the field. Upon this basis, the annual cost would be as follows:

Superintendents 360 days at \$5.00 per day .....	\$1,800
Division Field men 1,460 days at \$4.00 per day .....	5,840
<b>Total</b> .....	<b>\$7,640</b>

## Communication Expense:

In addition to the cost of office phones, the General Office would be in daily communication with the field men engaged in lease and rights-of-way activities. The estimated annual [fols. 8037-8038] cost for communication is as follows:

	Per Annum
Telegrams and Tolls, \$450.00 per month .....	\$5,400
Telephones 4 at \$6.60 each, \$26.40 per month .....	317
<b>Total</b> .....	<b>\$5,717</b>

## Floor Space Requirements:

The minimum floor space requirements for the Section would be 1,800 square feet.

## Division of Expense by Periods:

The personnel of the Land Division and the Lease Division would be engaged six months prior to the beginning of construction. The superintendent of rights-of-way and his clerk would be engaged three months prior to the beginning of construction. Salaries, transportation, and traveling expenses have been allocated on this basis.



## Defendant's Exhibit No. 28—Continued

## [fol. 8039] Administration and Legal Costs

## Geological Section

## General Summary

Salaries .....	\$160,050
Office Rent (Field Offices Only) .....	3,900
Office Expenses .....	6,060
Field Expenses .....	75,300
Equipment .....	10,619
Total .....	<u>\$255,929</u>

## [fol. 8040] Geological Section

## Summary of Costs

## Salaries:

Pre-construction period .....	\$24,150
Construction period:	
First construction year .....	\$48,300
Second construction year .....	48,300
Third construction year .....	39,300
	<u>135,900</u>

## Office Rent (Field Offices Only):

Pre-construction period .....	600
Construction period:	
First construction year .....	\$1,200
Second construction year .....	1,200
Third construction year .....	900
	<u>3,300</u>

## Office Expenses:

Pre-construction period .....	900
Construction period:	
First construction year .....	\$1,800
Second construction year .....	1,800
Third construction year .....	1,560
	<u>5,160</u>



## Defendant's Exhibit No. 28—Continued

## Field Expenses:

Pre-construction period .....		\$13,920
Construction period:		
First construction year .....	\$22,320	
Second construction year .....	22,320	
Third construction year .....	16,740	
	<hr/>	61,380

## Equipment (Depreciation Only):

Pre-construction period .....		1,609
Construction period:		
First construction year .....	\$3,218	
Second construction year .....	3,218	
Third construction year .....	2,574	
	<hr/>	9,010
Total .....		<hr/> \$255,929

[fol. 8041]

## Geological Section

Under the discussion of Preliminary Development and Organization Costs, the personnel and duties of the geological organization that would be required to reproduce the geological information and records in possession of Lone Star Gas Company as of January 1, 1933, within a four year period, were analyzed and the proportionate cost attributable to the development period set up as a part of the preliminary development costs.

In this phase of the analysis, it was estimated that this geological organization would begin to function immediately upon the completion of the preliminary geological report, and that the time involved as a preliminary charge would be one year which period would carry the geological work up to the date of the incorporation of the company.

The work of the Geological Section would have no direct relation to the construction of the physical plant of Lone Star Gas Company (except gas well construction) and for this reason, it has been assumed that the work of the Geological Section would continue without modification in personnel or general duties until the present geological records of the company would be reproduced. With the personnel set up for the preliminary period, it is estimated

that three years from the date of incorporation would be the minimum time required for this work.

This assumption would result in the substantial completion of the geological work necessary for the reproduction of information and records by a date which would be six months in advance of the estimated completion date of the physical property. At this time there would necessarily be a reduction in the personnel of the Geological Section [fol. 8042] in order to conform to the reduction of duties, which for the last six months of construction, would be confined to routine office work and the field work in connection with the location of the last group of gas wells, and the investigation of new acreage not actually in possession of the company as of January 1, 1933.

In connection with this estimate of geological costs from the date of incorporation to a date six months in advance of the completion of construction, a three year period, it will be unnecessary to set out in detail the scope of the work that would be done, or the duties of the various individuals that would be engaged for the reason that these details have been fully covered in the analysis of Preliminary Development Costs, and as above stated, for the reason that there would be no material modification in the work done, nor in the personnel engaged during the three year period following incorporation.

The item of office rent for the general office force has been eliminated for the reason that it has been assumed that the general office building of the company would be acquired at incorporation, and the cost of this building representing rent has been included as an undistributed cost.

#### Estimate of Cost—Three Year Period

Salaries of Personnel	Per Month	Per Year	Three Years
Chief Geologist.....	\$600	\$7,200	\$21,600
Field Geologist.....	400	4,800	14,400
Field Geologist.....	400	4,800	14,400
Field Geologist.....	400	4,800	14,400
Field Geologist.....	400	4,800	14,400
Assistant Geologist.....	200	2,400	7,200
Assistant Geologist.....	200	2,400	7,200

## Defendant's Exhibit No. 28—Continued

[fol. 8043] Salaries of Personnel—Contd.			
	Per Month	Per Year	Three Years
Assistant Geologist.....	\$200	\$2,400	\$7,200
Assistant Geologist.....	200	2,400	7,200
Paleontologist.....	400	4,800	14,400
Draftsman.....	175	2,100	6,300
Draftsman.....	175	2,100	6,300
Clerk.....	150	1,800	5,400
Clerk.....	125	1,500	4,500
Total.....			<u>\$144,900</u>

Office rent (General) Included under Undistributed General Costs. Square feet required 1,000.

## Office Rent—Field

Location	Per Month	Per Year	Three Years
Zone 1.....	\$25	\$300	\$900
Zone 2.....	25	300	900
Zone 3.....	25	300	900
Zone 4.....	25	300	900
Total.....			<u>\$3,600</u>

## General Office Expense

Item	Per Month	Per Year	Three Years
Telephone and Telegraph.....	\$50	\$600	\$1,800
Supplies.....	100	1,200	3,600
Total.....			<u>\$5,400</u>

## Field Expense

Party	Per Month	Per Year	Three Years
Chief geologist (Average 20 days in field at \$5.00 per day).....	\$100	\$1,200	\$3,600
Automobile (2,000 miles per month at \$0.08 per mile).....	160	1,920	5,760
Party 1 (2 men 30 days in field per month at \$4.00 per day).....	240	2,880	8,640
(2000 miles per month auto).....	160	1,920	5,760
Party 2 same as 1.....	400	4,800	14,400
Party 3 same as 1.....	400	4,800	14,400
Party 4 same as 1.....	400	4,800	14,400
Total.....			<u>\$66,960</u>

## [fol. 8044] Equipment (Depreciation Only)

Description		Per Year	Three Years
Office equipment.....	\$2,784 at 8%	\$223	\$669
Automobiles.....	5,000 at 50%	2,500	7,500
Field equipment.....	2,476 at 20%	495	1,485
Total.....			<u>\$9,654</u>

## Recapitulation

Salaries.....	\$144,900
Office rent (Field).....	3,600
General office expense.....	5,400
Field expense.....	66,960
Equipment (Depreciation only).....	9,654
Total Cost—Three Year Period.....	<u>\$230,514</u>

## Defendant's Exhibit No. 28—Continued

## Estimated Cost—Six Month Period

During the last six months of the construction period the reduction in the Geological Section personnel is reflected in the following schedule:

Salaries of Personnel	Per Month	Per Year	Six Months
Chief geologist.....	\$600	\$7,200	\$3,600
Field geologist.....	400	4,800	2,400
Field geologist.....	400	4,800	2,400
Assistant geologist.....	200	2,400	1,200
Assistant geologist.....	200	2,400	1,200
Paleontologist.....	400	4,800	2,400
Draftsman.....	175	2,100	1,050
Clerk.....	150	1,800	900
Total.....			<u>\$15,150</u>

Office rent (General) Included under Undistributed General Costs.

## Office Rent—Field

Location	Per Month	Per Year	Six Months
Zone 1.....	\$25	\$300	\$150
Zone 2.....	25	300	150
Total.....			<u>\$300</u>

## [fol. 8045] General Office Expense

Item	Per Month	Per Year	Six Months
Telephone and Telegraph.....	\$35	\$420	\$210
Supplies.....	75	900	450
Total.....			<u>\$660</u>

## Field Expense

Party	Per Month	Per Year	Six Months
Chief geologist (Average 10 days per month in field at \$5.00 per day).....	\$50	\$600	\$300
Automobile (1,000 miles per month at \$.08 per mile).....	80	960	480
Party 1 (2 men 30 days in field at \$4.00 per day each).....	240	2,880	1,440
(2,000 miles per month auto).....	160	1,920	960
Party 2 same as 1.....	400	4,800	2,400
Total.....			<u>\$5,580</u>

## Recapitulation

Salaries.....	\$15,150
Office rent (Field).....	300
General office expense.....	660
Field expense.....	5,580
Equipment (Depreciation only).....	965
Total Cost—Six Month Period.....	<u>\$22,655</u>

## Defendant's Exhibit No. 28—Continued

## Equipment (Field)

No.	Description	Unit Price	Replacement	Total
5	Automobiles (equipped for field use)	\$1,000.00	2 Years	\$10,000.00
5	Altimeters	150.00		750.00
4	Alidades	150.00		600.00
4	Plane Tables	21.75		87.00
5	Brunton Compass	30.00		150.00
5	Stadia Hand levels	50.00		250.00
4	Stadia rods	5.00	2 Years	40.00
4	Portable typewriters	48.60		184.40
5	Brief cases (Field type)	10.00	2 Years	100.00
1	Petrographic Microscope	250.00		250.00
1	Microscope lamp	25.00		25.00
4	Magnifying glasses	7.50		30.00
Total				\$12,476.40

## [fol. 8046-8047] Equipment (Office)

No.	Description	Unit Price	Total
5	Flat top desks	\$54.60	\$273.00
2	Regular typewriters	83.03	166.06
1	Long carriage typewriter	150.00	150.00
1	Calculating machine	180.00	180.00
2	Stenographer's desks	64.40	128.80
10	Straight chairs	11.85	118.50
2	Swivel chairs	22.00	44.00
10	Steel filing cabinets	27.30	273.00
2	Stenographer's chairs	14.25	28.50
2	Drafting tables	22.00	44.00
2	Drafting table stools	4.28	8.56
4	Drafting boards	3.50	14.00
1	3-Section oak map case	116.00	116.00
1	Map roll	100.00	100.00
1	Large table	84.00	84.00
4	Small tables	35.00	140.00
2	Costumers	7.40	14.80
2	Telephone stands	4.75	9.50
6	Letter trays	1.15	6.90
5	Ink stands	3.55	17.75
4	Card index files	28.00	112.00
5	Cuspidors	1.05	5.25
5	Mats	.33	1.65
5	Waste paper baskets	.95	4.75
2	Line-a-time	17.25	34.50
5	Pencil sharpeners	3.75	18.75
2	Rugs	50.00	100.00
2	Sets drafting instruments	25.00	50.00
	Laboratory apparatus	50.00	50.00
	Maps	500.00	500.00
	Library complete	6,000.00	6,000.00
Total			\$8,794.27

## Recapitulation

Field equipment	\$12,476.40
Office equipment	8,794.27
Total Field and Office Equipment	\$21,270.67

## Defendant's Exhibit No. 28—Continued

[fol. 8048] Administration and Legal Costs

## Purchasing Section

## General Summary

## Salaries:

Purchasing Department .....	\$174,225	
Stores Department .....	149,200	
Stationery Department .....	52,360	
Traffic Department .....	23,775	
	<hr/>	\$399,560

## Office Furniture and Fixtures:\*

Purchasing Department .....	\$1,960	
Stores Department .....	3,402	
Stationery Department .....	1,975	
Traffic Department .....	151	
	<hr/>	7,488

## Stationery and Supplies:

Purchasing Department .....	\$13,567	
Stores Department .....	12,500	
Stationery Department .....	2,293	
Traffic Department** .....	512	
	<hr/>	28,872

## Transportation:

Purchasing Department .....	\$7,964	
Stores Department .....	18,083	
	<hr/>	26,047

## Traveling Expenses:

Purchasing Department .....	\$9,200	
Stores Department .....	21,350	
Stationery Department .....	525	
Traffic Department .....	1,000	
	<hr/>	32,075

## Communication:

Purchasing Department .....	\$11,002	
Stores Department .....	21,155	
Stationery Department .....	4,328	
Traffic Department .....	108	
	<hr/>	36,593

Total .....		<u>\$530,635</u>
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\* Depreciation only.

\*\* Includes I. C. C. Reports \$311.50.



## Defendant's Exhibit No. 28—Continued

[fol. 8049]

## Purchasing Section

## Summary of Costs

## Pre-Construction Period:

## Purchasing Division:

Salaries .....	\$14,400
Office Furniture and Fixtures (Depreciation Only) .....	159
Stationery and Supplies .....	450
Transportation Expense .....	645
Traveling Expenses .....	744
Communication Expense .....	889
Total .....	<u>\$17,287</u>

## Stores Division:

Salaries .....	\$7,635
Office Furniture and Fixtures (Depreciation Only) .....	174
Stationery and Supplies .....	640
Transportation Expense .....	1,090
Traveling Expenses .....	1,370
Communication Expense .....	1,411
Total .....	<u>\$12,320</u>

## Stationery Division:

Salaries .....	\$6,820
Office Furniture and Fixtures (Depreciation Only) .....	257
Stationery and Office Supplies .....	490
Traveling Expenses .....	69
Communication Expense .....	564
Total .....	<u>\$8,200</u>

## Traffic Division:

Salaries .....	\$1,275
Office Furniture and Fixtures (Depreciation Only) .....	8
Stationery and Supplies .....	27
Traveling Expenses .....	250
Communication Expense .....	28
Total .....	<u>\$1,588</u>



## Defendant's Exhibit No. 28—Continued

[fol. 8050] Construction Period—First Year:

## Purchasing Division:

Salaries .....	\$48,900
Office Furniture and Fixtures (Depreciation Only) .....	551
Stationery and Supplies .....	4,322
Transportation Expense .....	2,239
Traveling Expenses .....	2,587
Communication Expense .....	3,094
Total .....	<u>\$61,693</u>

## Stores Division:

Salaries .....	\$39,898
Office Furniture and Fixtures (Depreciation Only) .....	909
Stationery and Supplies .....	3,342
Transportation Expense .....	4,822
Traveling Expenses .....	5,755
Communication Expense .....	5,641
Total .....	<u>\$60,367</u>

## Stationery Division:

Salaries .....	\$15,180
Office Furniture and Fixtures (Depreciation Only) .....	573
Stationery and Office Supplies .....	601
Traveling Expenses .....	152
Communication Expense .....	1,255
Total .....	<u>\$17,761</u>

## Traffic Division:

Salaries .....	\$7,500
Office Furniture and Fixtures (Depreciation Only) .....	48
Stationery and Supplies .....	162
Traveling Expenses .....	250
Communication Expense .....	27

Defendant's Exhibit No. 28—Continued  
[fol. 8051] Construction Period—Second Year:

**Purchasing Division:**

Salaries .....	\$48,900
Office Furniture and Fixtures (Depreciation Only) .....	551
Stationery and Supplies .....	4,322
Transportation Expense .....	2,239
Traveling Expenses .....	2,587
Communication Expense .....	3,094
<b>Total</b> .....	<b>\$61,693</b>

**Stores Division:**

Salaries .....	\$39,899
Office Furniture and Fixtures (Depreciation Only) .....	910
Stationery and Supplies .....	3,343
Transportation Expense .....	4,823
Traveling Expenses .....	5,755
Communication Expense .....	5,641

**Total** ..... **\$60,371**

**Stationery Division:**

Salaries .....	\$15,180
Office Furniture and Fixtures (Depreciation Only) .....	573
Stationery and Supplies .....	601
Traveling Expenses .....	152
Communication Expense .....	1,255

**Total** ..... **\$17,761**

**Traffic Division:**

Salaries .....	\$7,500
Office Furniture and Fixtures (Depreciation Only) .....	48
Stationery and Supplies .....	162
Traveling Expenses .....	250
Communication Expense .....	27

**Total** ..... **\$7,987**

## Defendant's Exhibit No. 28—Continued

[fol. 8052] Construction Period—Third Year:

## Purchasing Division:

Salaries .....	\$48,900
Office Furniture and Fixtures (Depreciation Only) .....	551
Stationery and Supplies .....	4,322
Transportation Expense .....	2,239
Traveling Expenses .....	2,587
Communication Expense .....	3,094
<b>Total</b> .....	<b>\$61,693</b>

## Stores Division:

Salaries .....	\$39,898
Office Furniture and Fixtures (Depreciation Only) .....	910
Stationery and Supplies .....	3,343
Transportation Expense .....	4,822
Traveling Expenses .....	5,754
Communication Expense .....	5,641
<b>Total</b> .....	<b>\$60,368</b>

## Stationery Division:

Salaries .....	\$15,180
Office Furniture and Fixtures (Depreciation Only) .....	572
Stationery and Supplies .....	601
Traveling Expenses .....	152
Communication Expense .....	1,255
<b>Total</b> .....	<b>\$17,760</b>

## Traffic Division:

Salaries .....	\$7,500
Office Furniture and Fixtures (Depreciation Only) .....	47
Stationery and Supplies .....	161
Traveling Expenses .....	250
Communication Expense .....	26
<b>Total</b> .....	<b>\$7,984</b>

## Defendant's Exhibit No. 28—Continued

[fols. 8053-8054] Post-Construction Period:

## Purchasing Division:

Salaries .....	\$13,125
Office Furniture and Fixtures (Depreciation Only) .....	148
Stationery and Supplies .....	150
Transportation Expense .....	602
Traveling Expenses .....	695
Communication Expense .....	831
Total .....	<u>\$15,551</u>

## Stores Division:

Salaries .....	\$21,870
Office Furniture and Fixtures (Depreciation Only) .....	499
Stationery and Supplies .....	1,832
Transportation Expense .....	2,526
Traveling Expenses .....	2,716
Communication Expense .....	2,821
Total .....	<u>\$32,264</u>

. . . . .

[fol. 8055]

## Purchasing Section

## General Organization Plan and Duties of the Section:

The Purchasing Section is that Section of the general organization that would be responsible for the securing of satisfactory materials and supplies at the cheapest prices available, quality of merchandise considered for the general office, for construction, and for other departments in the reproduction of Lone Star Gas Company. The Purchasing Section would also be responsible for the delivery of materials and supplies to the various departments in advance of the time set for their actual use. Through the proper functioning of this department delays and attendant unnecessary expenses in *in* construction costs would be eliminated.

In its general functions, the Purchasing Section would be strictly a material and supply department. The purchasing agent and the employees would receive, check, and pass for payment all invoices, negotiate all contracts and agreements covering the purchase of materials and supplies, maintain complete records of all purchases, and furnish reports to the general manager and department heads.

In the reproduction of Lone Star Gas Company, following the actual organization plan of this company when in construction and operation, the head of this section would be the purchasing agent who would report directly to the general manager, and who would also be in close contact with all other department heads in the organization.

Under the general supervision of the purchasing agent would be the Purchasing Department, Stores Department, the Traffic Department, and the Stationery Department. The Stores Department would be under the direct supervision of the supervisor of Stores, the Traffic Department under the direct supervision of the traffic manager, and the Stationery Department under the direct supervision of an assistant purchasing agent.

### Purchasing Department

#### Summary of Salaries and Expenses

##### Salaries:

Pre-Construction period .....	\$14,400	
Construction period .....	146,700	
Post-Construction Period .....	13,125	
	<hr/>	\$174,225

##### Office Furniture and Fixtures:

Depreciation based on total cost of \$7,001 as shown by detailed inventory .....	1,960
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##### Stationery and Supplies:

Pre-Construction period .....	450	
Construction period .....	12,967	
Post-Construction period .....	150	
	<hr/>	13,567

## Defendant's Exhibit No. 28—Continued

## Transportation:

Two automobiles .....	\$2,444	
Operating cost .....	5,520	
	<hr/>	\$7,964

## Traveling Expenses:

Purchasing agent .....	7,200	
Assistant purchasing agent .....	2,000	
	<hr/>	9,200

## Communication:

Telephone exchange service .....	3,802	
Telephone tolls .....	4,800	
	<hr/>	8,602
Telegraph tolls .....		2,400
		<hr/>
Total .....		\$217,918

(NOTE.) Office rent is included under Undistributed General Costs. The estimated net floor space that would be required for the Purchasing Department is 3,100 square feet.

## Personnel Analysis:

In developing an organization for a Purchasing Department that would be responsible for the purchase, receipt [fol. 8057] and distribution of the material and supplies that would be required for the reproduction of Lone Star Gas Company as of January 1, 1933, within a three year construction period, several basic factors must be considered.

1. That the value of the material that would be used in reproduction would be approximately \$30,000,000.

2. That the Construction Department would be continuously engaged under peak conditions throughout the construction period.

3. That several distinct classes of construction would be proceeding simultaneously and at different locations on the system as:

- (a) Laying pipe and drilling wells.
- (b) Building compressor stations, measuring and regulator stations.
- (c) Constructing telephone lines.
- (d) Building river crossings.
- (e) Laying gathering and well lines.

Due to the speed with which this work would be done, and the mass of details that would be involved in its satisfactory completion, a thoroughly experienced Purchasing Department would be required, and none but experienced employees with the exception of some engaged in minor capacities, could be used.

It would be necessary to begin the organization of the Purchasing Department immediately upon the completion of corporate organization, and the engagement of the engineering personnel, as the following materials and supplies would be needed.

Field equipment for surveying crews.

Office furniture and fixtures.

Stationery and office supplies.

It has been assumed that this date would be six months in advance of the beginning of actual construction. At the beginning of the six months pre-construction period, the department would have the following personnel:

Purchasing agent.

Assistant purchasing agent.

Chief Clerk.

Stenographer.

[fol. 8058] The qualifications and duties of these employees would be as follows:

#### Purchasing Agent:

It would be necessary to secure a man with proper qualifications for this work from the organization of some other company engaged in similar activities, as his work would require a thorough knowledge of the materials and supplies that would be used in the construction of Lone Star Gas Company. It would not be necessary for him to have had practical construction experience provided his previous



purchasing experience had been secured on the construction of a major gas system: His general duties would consist of the responsible direction and supervision of the Purchasing, Stores, Traffic, and Stationery Departments. He would negotiate all contracts and agreements, confer with the general manager and department heads, and direct the departmental work.

#### Assistant Purchasing Agent:

The assistant purchasing agent should have a thorough familiarity with the classes and values of office furniture, equipment and supplies, and should have a knowledge of paper stocks and printing methods. He should also have executive ability, as he would be placed in charge of the Stationery Department. His immediate duties would be the purchase of the necessary furniture, supplies, stationery, and printed forms needed by the Engineering and Purchasing Departments. His other duties would consist of the setting up and maintenance of proper price and stock records, the compilation and furnishing of necessary reports of issues required for accounting purposes, the interviewing of salesmen, and the maintenance of inter-departmental contacts.

[fol. 8059] (NOTE.) The salary and expenses of the assistant purchasing agent have been included under the cost of the Stationery Department.

#### Chief Clerk:

The chief clerk would, of necessity, be a man thoroughly trained and experienced in the gas and oil industry material supply markets and prices. He would also have executive qualifications, as he would have direct supervision of the detail division of the department, and would assist the purchasing agent in the selection of the clerical personnel for the department.

#### Stenographer:

The stenographer should be a man experienced in stenographic work, and should be familiar with the terms, both catalog and field, used in describing the material that would be used in the construction work. His duties would be the handling of all correspondence for the purchasing agent,

assistant purchasing agent, and chief clerk and the typing of all orders from requisitions, for the office, and for material and supplies required by the field forces of the Engineering Department. After the complete department is organized, this stenographer would have direct supervision over the stenographers required to write orders, and would personally check all orders with the requisitions. He would also act as secretary to the purchasing agent and assistant purchasing agents, other than the assistant purchasing agent in charge of the Stationery Department.

At this time, it would also be necessary for the purchasing agent to begin the organization of the Stores and Traffic Departments. A thoroughly capable supervisor of stores and a traffic manager would have to be secured. Care should be exercised in the choice of these two men, [fol. 8060] and they should have highest qualifications as considerable economy to the company would result in securing men for these two positions who would be able to build efficient departments capable of handling the large amount of work that would begin immediately after the organization of the departments.

The Engineering Department would begin furnishing the Purchasing Department with specifications for construction equipment, material and supplies from three to four months in advance of the date set for starting actual construction. The Purchasing Department would at this time begin the assembly of a complete list of manufacturers and jobbers who would be able to furnish material and supplies for the construction program. The Purchasing Department would begin the preparation of inquiries from specifications furnished by the Engineering Department.

Within two months after the beginning of the six months pre-construction period, the following employees would be added:

Assistant purchasing agent.

Assistant purchasing agent.

Price Clerk.

Price Clerk.

Stenographer.

Typist.

Typist.

The duties of these added employees would be as follows:

### Assistant Purchasing Agent:

This assistant purchasing agent would be the purchasing agent's first assistant and would have supervision of the department. He would interview salesmen and relieve the purchasing agent of the overflow from his desk. He would sign all orders when the purchasing agent was absent, and handle purchases for pipe and machinery, as well as other major items used in the construction. He should be familiar with the material and supplies needed, and be an experienced purchasing agent.

### [fol. 8061] Assistant Purchasing Agent:

This assistant purchasing agent also should have had previous experience in a Purchasing Department of a natural gas pipe line company as he would purchase all the hand tools and fittings required for this work. He would interview salesmen. He would also check all orders against requisitions before they would be passed to the purchasing agent for signing.

### Price Clerks:

The qualifications of two price clerks would require that they have a thorough knowledge of the work they would be called upon to perform and be able to understand the specifications of materials and the purpose for which these materials would be required. They would prepare inquiries from requisitions received from the Engineering Department, and request quotations from the various companies that could furnish the material needed. They would set up and maintain quotations and price records; check requisitions before placing orders, and inform purchase order clerks as to the sources of supply; check prices on all invoices, and handle correspondence with reference to credit memoranda covering incorrect prices. They would also handle other correspondence in connection with quotations, catalogs, prices, trade and cash discounts. They would make card-index records of cash discounts, and stamp all invoices with dates discounts would be due; keep necessary records of purchases on contracts, blanket orders, etc., and keep the purchasing agent informed as to the status of contracts, agreements, and blanket orders, prices, transfers, estimates, and inventories.

**Stenographer :**

This stenographer should have had previous experience [fol. 8062] in similar work, and should be thoroughly capable and efficient. He would handle all stenographic work for the chief clerk and price clerks.

**Typist:**

This clerk should be thoroughly capable and experienced and be familiar with terms, names, and general specifications of materials that would be used in this work. He would type lists of materials and specifications prepared by the price clerks for quotations. When required, he would be transferred to the duties of tracing clerk.

**Typist:**

This clerk should be thoroughly capable and experienced, and familiar with terms, names, and general specifications of materials that would be used in this work. He would also assist the other typist and would type purchase orders. Later he would be transferred to the duties of purchase order clerk.

Within four months after the beginning of the six-month pre-construction period, the following employees would be required:

- Purchase order clerk.
- Purchase order clerk.
- Stenographer.
- Purchase order invoice clerk.
- Field order invoice clerk.
- Pipe order clerk.

whose duties would be as follows:

**Purchase Order Clerks:**

These two clerks should be capable and efficient typists and thoroughly familiar with classes of materials that would be used in this work. They would be under the supervision of the head stenographer, and it would be their duties to assign purchase order numbers to requisitions, to keep proper register and index of purchase orders, and to type purchase orders from requisitions, to assist in checking orders against requisitions, and to file requisitions; and the typist already

[fol. 8063] in the organization and referred to above would be transferred to one of these jobs.

**Stenographer:**

This stenographer should be thoroughly capable and efficient and experienced in this line of work. He would handle stenographic work and typing in detail for the division, file correspondence, and assist other clerks.

**Purchase Order Invoice Clerk:**

This clerk should have had previous experience in similar work, and should be familiar with requirements and procedures of the Accounting and Stores Departments. He should also be familiar with the various kinds of materials required, and the purposes for which this material would be used. He would handle purchase orders (except those assigned to pipe order clerk); set up and keep proper file of open purchase orders; match invoices and material received reports; check quantities and specifications on invoices against orders and material received reports; trace storekeepers for material received reports; trace shippers for invoices and shipping papers. He would also handle correspondence regarding shortages, return of incorrect and defective materials, and credit memoranda covering and furnish the Traffic Department with necessary papers and data for filing claims for loss and damage.

**Field Order Clerk:**

A clerk for this job should have had previous experience in this class of work. He should be familiar with Accounting and Stores Department procedure, and field activities and requirements. He would register and file field orders; trace field men for orders; trace vendors for invoices; match [fol. 8064] and check invoices with orders; handle correspondence regarding discrepancies in invoices and orders, and credit memoranda covering invoice shortages and materials returned.

**Pipe Order Clerk:**

The pipe order clerk should be a man having a wide experience in the handling of orders for pipe and other kindred materials that would be used in the work, and should be thoroughly familiar with all such materials. He should



understand Accounting and Stores Department procedure, and should be familiar with gas pipe line construction work. He would check all requisitions for carload shipments of pipe; place orders to cover; keep complete record of all such orders; arrange pipe shipping schedules, and trace mills for shipping information. He would furnish shipping notices to the Stores, Traffic, Engineering and Pipe Line Departments; check invoices as to quantities and prices; match invoices with material received reports; check mill tallies and storekeeper's tallies. He would also handle all requisitions, orders, shipping notices, material received reports, and invoices covering pipe line paint, oxygen, acetylene, carbide, and welding rod; set up and maintain complete field and records; handle correspondence in connection with the above, and furnish the Traffic Department necessary papers for filing loss and damage claims.

At the end of the six-month pre-construction period, the following additional employees would be required to complete the organization and carry on the work of the department during the three-year construction period.

Tracing Clerk.

Drum record clerk.

Purchase order invoice clerk.

Field order invoice clerk.

Stenographer.

File clerk.

[fol. 8065] Tracing Clerk:

The typist already employed and referred to above would be transferred to this job. His duties would be to set up and maintain open file on all tracing copies of purchase orders (except those handled by pipe order clerk); check acknowledgements against orders; make record of shipping dates, and notify department heads and field men when shipments would be made, how shipped, routing, and approximate date of delivery. He would also trace shippers on all open orders at regular intervals; check all weekly reports of open purchase orders from the field, and advise field men with reference to the status of all open orders reported by them. This clerk would also be a typist and would handle all correspondence in connection with this desk.

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### Drum Record Clerk:

The drum record clerk should be experienced in work of a similar nature. His duties would be the setting up and maintenance of card-index or ledger record of all oxygen and acetylene cylinders received and returned; also, all other returnable containers, including electric wire and cable reels, and he would also handle transfers of full drums from one point to another; check semi-monthly drum reports; keep complete file records of all transfers and reports of empty cylinders returned; check drum reports from vendors and furnish them with reports of drums outstanding at regular intervals.

### Purchase Order Invoice Clerk:

This clerk should have had previous experience in similar work, and should be familiar with requirements and procedures of the Accounting and Stores Departments. He should also be familiar with the various kinds of materials required, and the purposes for which used. He would handle [fol. 8066] the purchase orders (except those assigned to pipe order clerk); set up and keep proper file of open purchase orders; match invoices and material received reports, check quantities and specifications on invoices against orders and material received reports; trace storekeepers for material received reports; trace shippers for invoices and shipping papers. He would also handle correspondence regarding shortages, return of incorrect and defective materials, and credit memoranda covering; furnish Traffic Department with necessary papers and data for filing claims for loss and damage.

### Field Order and Invoice Clerk:

A clerk for this job should be capable and efficient, and have had previous experience in this class of work. He should be familiar with Accounting and Stores Department procedure, and field activities and requirements. He would register and file field orders; trace field men for orders; trace vendors for invoices; match and check invoices with orders; handle correspondence regarding discrepancies in invoices and orders, and credit memoranda covering invoice shortages and materials returned.



### Stenographer:

This stenographer should have had previous experience in similar work, and should be thoroughly capable and efficient. He would handle all overflow stenographic work for the chief clerk and price clerks as the volume of their work would be increased to such an extent after the beginning of actual construction that an additional stenographer would be necessary. He would also handle correspondence and details from the price order clerk.

### [fol. 8067] File Clerk:

This file clerk should be capable, efficient, and experienced in filing. His duties would be the opening, stamping, and distributing of all incoming mail; the collection and mailing of all outgoing mail; the distributing files and correspondence between desks in the department; the preparing and filing of all purchase orders. He would also pull and deliver closed orders from files when called for and keep record of all "out" orders and see that they are returned to the files. He would keep a daily record of the number of invoices received and passed, and the number of pieces of correspondence handled in and out, and also run errands.

### Schedule of Salaries

#### Pre-construction Period:

Position	Months	Rate	Total
Purchasing agent	6	\$700	\$4,200
Assistant purchasing agent	4	400	1,600
Assistant purchasing agent	4	300	1,200
Chief clerk	6	300	1,800
Stenographer	6	175	1,050
Price clerk	4	200	800
Price clerk	4	150	600
Stenographer	4	125	500
Purchase order clerk	4	150	600
Purchase order clerk	2	150	300
Stenographer	2	125	250
Tracing clerk	4	125	500
Purchase order invoice clerk	2	150	300
Field order invoice clerk	2	150	300
Pipe order clerk	2	200	400
<b>Total</b>			<b>\$14,400</b>

## Defendant's Exhibit No. 28—Continued

## Salaries

## Three Year Construction Period:

	Rate Per Year	Total 3 Years
Purchasing agent	\$8,400	\$25,200
Assistant purchasing agent	4,800	14,400
Assistant purchasing agent	3,600	10,800
Chief clerk	3,600	10,800
Price clerk	2,400	7,200
[fol. 8068] Price clerk	1,800	5,400
Stenographer	2,100	6,300
Stenographer	1,500	4,500
Stenographer	1,500	4,500
Stenographer	1,500	4,500
Purchase order clerk	1,800	5,400
Purchase order clerk	1,800	5,400
Tracing clerk	1,500	4,500
Purchase order invoice clerk	1,800	5,400
Purchase order invoice clerk	1,800	5,400
Field order invoice clerk	1,800	5,400
Field order invoice clerk	1,800	5,400
Pipe order clerk	2,400	7,200
Drum record clerk	1,800	5,400
File clerk	1,200	3,600
Total	\$48,900	\$146,700

## Salaries

## Post-Construction Period:

	Months	Rate	Total
Purchasing agent	6	\$700	\$4,200
Assistant purchasing agent	6	400	2,400
Chief clerk	6	300	1,800
Stenographer	6	175	1,050
Stenographer	6	125	750
File clerk	6	100	600
Price clerk	3	200	600
Stenographer	3	125	375
Purchase order invoice clerk	3	150	450
Field order invoice clerk	3	150	450
Drum record clerk	3	150	450
Total			\$13,125

## Defendant's Exhibit No. 28—Continued

## Summary

Pre-construction period—6 months .....	\$14,050
Three year construction period \$48,900 per year ..	146,700
Post-construction period—6 months .....	13,125
<b>Total Four Years .....</b>	<b>\$173,875</b>

## [fol. 8069] Reduction of Personnel

## Personnel at End of Three Year Construction Period.

Purchasing agent	Stenographer
Assistant purchasing agent	Stenographer
Chief clerk	Purchase order invoice clerk
Price clerk	Field order invoice clerk
Secretary to purchasing agent	Drum record clerk
File clerk	

## Personnel Three Months After Construction is Completed:

Purchasing agent  
 Assistant purchasing agent  
 Chief clerk  
 Secretary to purchasing agent  
 Stenographer  
 File clerk

The above force would be required for an additional three months only which would be six months after construction is completed, at which time all employees would assume operating duties of the department.

## Stationery and Office Supplies

During the year 1931, the stationery and office supply requirements of the Purchasing Department of Lone Star Gas Company amounted to \$1,695.83. During this period the amount of purchases handled was comparatively small as the company was in operation only. It is, therefore, considered that a conservative estimate for the purpose of this report would be twice the cost for 1931, or three thousand three hundred ninety one dollars and sixty six cents per year, and upon this basis the estimate follows:

## Defendant's Exhibit No. 28—Continued

Pre-construction period—6 months .....	\$450.00
Construction period—3 years .....	12,966.64
Post-construction period—6 months .....	150.00
Total .....	<u>\$13,566.64</u>

## Transportation

It would be necessary for the purchasing agent and his first assistant to make frequent trips over the system during [fol. 8070] the four years this department would be engaged in work in connection with the construction program. Therefore, for this purpose, the following automotive equipment would be required:

One Chrysler standard sedan .....	\$1,746.50
One Chevrolet standard sedan .....	697.50
Total .....	<u>\$2,444.00</u>

It is assumed that these automobiles would be practically worn out at the end of the four years, therefore, no salvage has been allowed.

## Automobile Operating Expense

It has been estimated that during the period of construction, the Chrysler automobile would travel approximately 18,000 miles per year, and the Chevrolet approximately 12,000 miles per year, or a total of 120,000 miles, cost of operation being as follows:

Chrysler—72,000 miles at \$.05 per mile .....	\$3,600.00
Chevrolet—48,000 miles at \$.04 per mile .....	1,920.00
Total .....	<u>\$5,520.00</u>

(NOTE.) The Automotive Section advises that over a period of four years, operating costs of a Chrysler would average around \$.045 to \$.05 per mile, and around \$.035 to \$.04 per mile on a Chevrolet.

## Traveling Expenses

During the period of construction, it would be necessary for the purchasing agent to make a number of trips to East-

ern pipe mills and other supply sources, and to make frequent trips over the system. It is estimated that his expenses for this purpose over the entire period would average approximately one hundred and fifty dollars per month.

Total: Four years at \$1,800.00 per year ..... \$7,200.00

[fols. 8071-8072] It would also be necessary for the first assistant purchasing agent to make frequent trips of inspection to the various locations where materials would be delivered, and it is estimated his traveling expenses would average approximately five hundred dollars per —.

Total: Four years at \$500.00 per year ..... \$2,000.00

### Communication

The following expenses for telephone exchange service and telephone and telegraph tolls would be incurred in view of the fact that a great amount of such communication would be necessary in connection with the ordering, shipping and delivery of the necessary equipment, materials and supplies. Therefore, basing this on the present service charge per phone, it is estimated that the following expenses would be incurred:

12 Telephones at \$6.60 each per month .....	\$3,801.60
Telephone tolls \$100.00 per month (Estimated) ..	4,800.00
Telegraph tolls \$50.00 per month (Estimated) ..	2,400.00
<b>Total</b> .....	<b>\$11,001.60</b>

[fol. 8073] Stores Department

### Summary of Salaries and Expenses

#### Salaries:

Pre-construction period .....	\$7,635
Construction period .....	119,695
Post-construction period .....	21,870
	<hr/>
	\$149,200

#### Office Furniture and Fixtures:

Depreciation based on total cost of \$12,148 as shown by detailed inventory .....	3,402
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## Defendant's Exhibit No. 28—Continued

## Stationery and Office Supplies:

Stationery and supplies .....	\$12,500
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## Transportation:

## Three automobiles—Auto Expense:

Pre-construction period .....	1,090	
Construction period .....	14,467	
Post-construction period .....	2,526	
	<hr/>	18,083

## Traveling Expenses:

## Supervisor of Stores and Inventory men

Pre-construction period .....	1,370	
Construction period .....	17,264	
Post-construction period .....	2,716	
	<hr/>	21,350

## Communication:

Pre-construction period .....	1,411	
Construction period .....	16,923	
Post-construction period .....	2,821	
	<hr/>	21,155

Total .....	\$225,690
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(NOTE.) Office rent is included under Undistributed General Costs. The estimated net floor space that would be required for the Stores Department is 2,600 square feet.

## Duties of the Department and Personnel Analysis

In the reproduction of Lone Star Gas Company, the Stores Department would be organized about ninety days before actual construction would begin, and in this connection, the general office personnel, which would consist of the following employees, would be actively engaged at the beginning of the construction period.

[fol. 8074] Supervisor of stores.

Stenographer.

Assistant supervisor of stores.

Stenographer.

Chief Clerk.

Voucher clerk.

Two invoice clerks.

Combination stenographer and comptometer operator.

Surplus clerk.

Price clerk.

Two combination stock clerks and machine operators.

Two comptometer operators.

Two stenographers.

Field supervisor.

Two inventory field men.

Progress report clerk.

Combination stenographer and comptometer operator.

This personnel which would comprise the departmental organization at the end of the pre-construction period would be amplified as the actual construction progressed.

As soon as material would be ordered for the various lines, compressor stations and other elements of the construction program, the Stores Department field men would furnish routings and destination points to the Purchasing Department. Pipe yards would be rented, and temporary warehouses secured in which to house and protect material items which would be delivered in advance of construction.

A large amount of preliminary work would be required of the department in connection with estimates for the automotive equipment that would be required for the unloading, hauling, and transfer of material inasmuch as the department would be directly responsible for the delivery of all materials of construction.

While not a part of the cost of General Stores to which this estimate has been confined, a knowledge of the activities of the Field Stores Division of the department the cost of which is included in the estimate of direct structural costs is necessary for a clear concept of the part that the Stores Department would play in the reproduction program.

[fol. 8075] As material would be ordered for pipe lines, drilling wells, compressor stations and other elements of the property, it would be necessary to employ divisional storekeepers and warehousemen. It would be the duty of the storekeepers to keep the supervision of the Construction Department fully advised as to the receipt of material, and be responsible for the following:



1. The receipt and issuance of all material.
2. The uncrating and storing of all material.
3. The unloading and tallying of pipe when received.
4. The checking of material against purchase orders.
5. The payment of all freight and express charges.
6. The origination of all claims for damages and shortages.
7. The draying of material to and from warehouses.
8. The keeping up with material used on completion reports.
9. The keeping of drum records for oxygen and acetylene drums.
10. Locating where material is to be used by account numbers.
11. The purchasing of emergency material needed by the Construction department.
12. The issuance of material received reports, storehouse requisitions, and transfers.
13. The origination of purchase requisitions for material needed in construction.
14. The tallying of pipe on various lines constructed and other similar details.

All records and supervision in connection with the above field work would be kept and maintained by the General Stores Division.

It would be necessary for the Stores Department to have constant and close contacts with the Purchasing Department, the Rights-of-way Department, the Engineering Department, and the Construction Department for the purpose of securing prompt delivery of material and the pre-[fol. 8076] vention of the delivery of defective material or material unsuited for specific purposes. It would also be necessary for the Stores Department to provide for the vouchering of all invoices, the registering of invoices, and the listing of all invoices by voucher number.

After warehouses had been located for the construction of compressor stations and for field work, stock records

would be set up in the general office in order to maintain a record of material used on the various accounts. After the construction work had progressed and some of the stations and lines had been completed, it would be necessary to add to the general office force a surplus material clerk whose duties will be developed in the subsequent discussion.

#### Supervisor of Stores

In the reproduction of Lone Star Gas Company, the duties of the supervisor of stores would be so numerous and varied that in order to properly discharge these duties he should have a thorough knowledge of all materials which he would be called upon to handle, and of the purpose for which they would be used. He should also thoroughly understand the principles of accounting in order to furnish correct distribution for material received, or used out of his warehouses. He would act in a supervisory capacity, seeing that materials would be unloaded promptly and that pipe would be strung satisfactorily on pipe lines; that warehouse stocks would be kept up and pipe properly checked as it would be delivered to the job. He should see to the payment of invoices, the filing of claims and many other details which would come up during a construction period of this length of time, and on a construction program of this magnitude.

In order to secure a man with these qualifications, it [fol. 8077] would be necessary to secure him from some supply house or preferably, from some other natural gas company.

#### Stenographer for Supervisor of Stores:

It would be necessary for a stenographer for this position to have had experience with a supply house and to be thoroughly familiar with pipe and fittings, as well as with filing.

#### Assistant Supervisor of Stores:

The assistant supervisor of stores would be required to have practically the same general knowledge as the supervisor of stores. He would take care of the overflow of details. He should also be familiar with all classes of material and accounting procedure, as he would be respon-

sible for the reports on receipt of material, transfers covering material used, and the account numbers on which the material would be used. It would be his duty to see that the general office would function properly; that payment of invoices would be made promptly in order to secure discounts; to keep up with the construction work in the field, and to see that the field storekeepers were taking care of their work in a proper manner.

In order to secure a man of the above qualifications, it would be necessary to secure him from some supply house or gas company.

#### Stenographer for Assistant Supervisor of Stores:

It would be necessary for a stenographer for this position to have had experience with a supply house and to be thoroughly familiar with pipe and fittings, as well as with filing.

#### Chief Clerk:

The chief clerk's duties would be the supervision of all of the work of the clerks in the Stores Department, to see that the invoices were paid promptly and properly entered [fol. 8078] on stock records; that transfers were priced and entered on stock records, and to supervise the handling of material transfer orders and material records. It would also be his duty to handle office correspondence and to see that the department functioned properly.

To secure the services of a man of the above experience, it would be necessary that he be secured from a supply house or another gas company.

#### Voucher Clerk:

The duties of the voucher clerk would be to voucher all invoices with voucher checks and to keep an invoice register showing the date paid and the voucher number covering, and to see that all invoices were paid promptly in order to take advantage of cash discounts.

#### Invoice Clerks:

After construction work is fully started, it would be necessary to have two additional invoice clerks who would assist the voucher clerk in the paying of invoices and the checking

of the invoice register by showing the voucher numbers and dates paid, as well as to see that all invoices were paid in time to take advantage of cash discounts.

#### Surplus Material Clerk:

As all purchase requisitions would be passed to the Stores Department, it would be the function of the surplus material clerk to keep informed relative to any surplus material from pipe line, compressor station, and other construction for the purpose of furnishing material for construction from surplus stock rather than by the purchase of new material. This clerk would be one of the most important employees in the department. A failure on his part to properly discharge his duties would result in an accumulation of surplus [fol. 8079] material in warehouses with corresponding losses resulting therefrom. A thorough knowledge of materials of construction would be required as a qualification of this clerk:

#### Combination Stenographer and Comptometer Operator:

It would be necessary to have a combination stenographer and comptometer operator in the invoice department, preferably someone who had had experience with a supply house or a gas company. He would check discounts and prices on invoices and tally sheets, and write letters regarding statements and other office details.

#### Price Clerk:

It would be the duty of the price clerk to price all transfers and material received reports and to see that they would be properly entered on the stock records. This man should be familiar with all classes of material. He should also be familiar with accounting procedure of the company, and it would be his duty to see that transfers would be properly priced.

In order to secure a man of this experience it would be necessary to secure him from some supply house.

#### Stock Record Clerks and Machine Operators:

It would be the duty of the stock record clerks to keep the stock records up to date, handle all material, receive reports with invoices, and enter the stock records; handle all trans-

fers in and out of the respective warehouses and to be familiar with the operation of a Burroughs Posting Machine and a Moon Hopkins Machine in order to handle these transfers. He would keep the stock records up to date, and take off monthly balances for the Stores Department statement of material on hand. These clerks should be familiar with material of all kinds, keep themselves posted in prices [fol. 8080] and also see that transfers were handled properly.

#### Comptometer Operators:

It will be necessary after construction work advances to have two comptometer operators for the extension of material received reports, prices of material and the checking of transfers, invoices and pipe tallies.

#### Stenographers:

It would be necessary to have two stenographers in this department after material begins to arrive to write letters on material which has been damaged or is short in shipment, or any other letters for anyone under the chief clerk. They should also be thoroughly familiar with filing and receive all mail for this department.

#### Field Material Supervisor:

This man should be familiar with all classes of material and should keep up with all construction work, oversee the pipe stringing foreman, see that the pipe as well as other material were handled properly. He would have to be a good organizer, as the inventory men and district storekeepers, as well as the storekeepers would be under his general supervision during the construction period. He would be in the field practically all the time in direct connection with all of the work that would be going on. He should be able to line up all storekeepers in the field as to the proper procedure in handling Stores Department records. He would report daily to the supervisor of stores or his assistants on various matters pertaining to construction. In order to obtain a man with these qualifications it would be necessary to secure him from some supply company or gas company.



**[fol. 8081] Inventory Men:**

After construction work has made some progress and various stations have been completed, it would be necessary to have inventory men close out the expenditure requisitions and take inventories of material that would be left over from construction. These inventory men should thoroughly understand all classes of material, and the general routine of stores work and also be familiar with accounting procedure. They should be able to advise and instruct the storekeepers and warehousemen with whom they might come in contact. They would also furnish routing and destination points for the delivery of material, and report to the field material supervisor. To secure two men for this work, it would be necessary to get them from a supply house or some other gas company.

**Progress Report Clerk:**

It would be necessary when construction began to have a progress report clerk who would check progress reports on pipe received and other material, showing how much pipe had been strung each day and the general progress made during construction. This man should be familiar with all the field operations and the location of the work, as he would be required to work in connection with the field material supervisor in regard to the handling of trucks and truck drivers. He would also have to keep in touch with all the gangs that might be working each day.

**Combination Stenographer and Comptometer Operator:**

It would be necessary to have a stenographer in the inventory department for the filing and writing of letters. During the first year of construction a combination stenographer and comptometer operator would suffice for this work. After [fol. 8082] construction had progressed a comptometer operation in addition to the stenographer would be required.

## Defendant's Exhibit No. 28—Continued

## Schedule of Salaries

Position	Monthly Rate	Annual Total
Supervisor of stores .....	\$450	\$5,400
Assistant supervisor of stores .....	250	3,000
Chief clerk .....	200	2,400
Stenographer .....	125	1,500
Stenographer .....	115	1,380
Voucher clerk .....	175	2,100
Invoice clerk .....	125	1,500
Invoice clerk .....	125	1,500
Stenographer and comptometer operator .....	125	1,500
Surplus material clerk .....	165	1,980
Price clerk .....	135	1,620
Stock record clerks and machine operators (Each) .....	125	1,500
Comptometer operators (Each) .....	115	1,380
Stenographers (Each) .....	100	1,200
Field material supervisor .....	200	2,400
Inventory men (Each) .....	175	2,100
Progress report clerk .....	150	1,800
Comptometer operator and stenographer .....	100	1,200

## Stationery and Office Supplies

Based upon the past experience of the department in construction, it is estimated that requirements for stationery and supplies would cost \$12,500.

Total ..... \$12,500

## Transportation

Four automobiles would be required for employees of the office who would have general supervision of work in the field. These automobiles would cost \$2,963 and would lose their entire value during the progress of the work.

Total ..... \$2,963

## Traveling Expenses

\* Traveling expenses of the supervisor and inventory men. [fols. 8083-8084] As previously developed, the Stores De-



partment would be responsible for the routing and destination of pipe and equipment, the rent of temporary warehouses, the unloading and stringing of pipe, and other field operations. At least four men from the department would be traveling a major portion of time involved in construction. The expenses of these men have been estimated at \$21,350.

Total ..... \$21,350

#### Communication

Long distance tolls, telegrams and telephones. Due to the fact that the company lines would not be built in advance of construction, the Stores Department would incur large expenditures on account of long distance tolls. These calls would become less during the progress of construction on account of the partial completion of the company system. It is estimated that the cost of tolls for the pre-construction and construction periods would be \$15,000.

Total ..... \$15,000

The charges for telegrams during the pre-construction and construction periods would necessarily be large. This estimate has been based upon the actual expenditures for the department during periods in which a large amount of construction work was current. The estimated amount has been placed at \$5,000.

Total ..... \$5,000

For the office force of the department to function properly, eight telephones at a cost of \$27.50 would be required for the period, or a total outlay of \$1,155.

Total ..... \$1,155

[fol. 8085] Stationery Department.

#### Summary of Salaries and Expenses

##### Salaries:

Pre-Construction period .....	\$6,820
Construction period .....	45,540
Post-Construction period .....	
	<hr/> \$52,360

## Defendant's Exhibit No. 28—Continued

<b>Office Furniture and Fixtures:</b>		
Depreciation based on total cost of \$6,888 as shown by detailed inventory		\$1,975
<b>Stationery and Supplies:</b>		
Pre-Construction period	\$490	
Construction period	1,803	
Post-Construction period		2,293
<b>Traveling Expenses:</b>		
Supervisor		525
<b>Communication:</b>		
Telephone exchange service	\$1,529	
Dictograph installation	700	
Telephone tolls	1,470	
Telegraph tolls	630	
		4,329
<b>Total</b>		<b>\$61,482</b>

(NOTE) Office rent is included under Undistributed General Costs. The estimated net floor space that would be required for the Stationery Department is 3,062 square feet.

**Duties of the Department and Personnel Analysis:**

This department would report directly to the Purchasing Agent.

The duties of this department would be to promptly furnish the general and field offices with all office furniture and equipment, properly maintain this equipment, and supply all offices with printing, stationery, office, and janitor's supplies. This department would be responsible for the maintenance of sufficient stock at all times. It would prepare receipt, disburse, and account for this stock, and assist in the standardization of office equipment, furniture, printed forms, and supplies for the purpose of economy and practicability.

In the reproduction of Lone Star Gas Company, this department would function from the beginning of organization or six months prior to actual construction, and would require at the outset a suitable department head and four experienced clerks, as follows:

Chief clerk.  
 Secretary and order clerk.  
 Stock record and disbursement clerk.  
 Multigraph and mimeograph operator.

As the organization man-power increased it would be necessary to increase the Stationery Department force by the employment of an additional multigraph operator, a disbursement clerk and, when the field foremen and storekeepers were about 50% organized, a shipping clerk. The department would be complete at least sixty days prior to actual construction.

#### Assistant Purchasing Agent:

The assistant purchasing agent should be a man of experience in accounting, selling and purchasing, and should be thoroughly familiar with classes and values of office furniture, equipment and supplies. He should also have a knowledge of paper stocks and printing methods and be capable of contacting the public as well as the department heads of the organization. His specific duties would be:

The selection of suitable department personnel.

The purchasing of office supplies and equipment.

The surveying of sources of supply, furniture and equipment houses, printing and lithographing establishments.

[fol. 8087] The supervision of department work.

The assisting of all departments in selection of proper stocks, sizes and binding or filing methods for all forms and suitability of various grades of supplies and determining the maximum and minimum required of such items.

The making of contracts for purchases of such equipment or service as should be contracted for.

The interviewing of sales representatives.

The accounting for disbursements.

The handling of correspondence.

#### Chief Clerk:

The chief clerk should have a thorough knowledge of general office and stock handling procedure and he should be an experienced office supply man. His specific duties would be:

The assisting of the department head in various duties.

The maintaining of records on brief cases, typewriters, furniture, statements and shipments.

The checking of all orders, invoices, statements and shipments.

The keeping current of all price lists and catalogues.

The transferring of surplus equipment and supplies from points where not in use to points where needed.

The making up of requisitions for stock items.

The promotion of a feeling of friendliness between employees of this and other departments.

The checking of multigraph shop job tickets and estimating the savings effected by that department.

The handling of correspondence.

#### Secretary and Order Clerk:

A secretary and order clerk should be experienced in secretarial and general office work and have a knowledge of purchasing procedure. His specific duties would be:

The contacting of sales representatives.

Secretarial work.

The typing of purchase orders and statements.

The making up of quotation sheets and the listing of bids on bid cards.

Filing.

The keeping of furniture transfer records.

#### Multigraph Operator:

The multigraph operator should be experienced and thoroughly capable of handling all phases of multigraphing and mimeographing.

[fol. 8088] His specific duties would be as follows:

The setting of forms for multigraph.

The operating of multigraph and mimeograph machines.

The knocking down of forms run on multigraph.

The cutting of mimeograph stencils other than circular letters for various departments.

The cutting of paper for forms run.

The cutting of paper stock for field stationery, file backs, index cards.

The gathering of forms of more than one copy.

The padding of forms.

The washing and repairing of multigraph.

The working up of job tickets on jobs done in shop.

The binding of books.

### The Disbursement Record and Invoice Clerk:

The disbursement record and invoice clerk should have general office experience with a working knowledge of stock handling and accounting. His duties would be as follows:

- The posting of each day's disbursements and receipts.
- The compilation and checking of monthly statement of disbursements and receipts.
- The crediting into stock of all material returned.
- The keeping of yearly and monthly record on, and passing of all invoices and multigraph job tickets.
- The receiving of shipments and deliveries.
- The checking of stock currently to avoid overages and shortages.

### Assistant Multigraph Operator:

The duties of the assistant multigraph operator would be as follows:

- The setting and knocking down of type.
- The operating of multigraph and mimeograph machines.
- Trimming and padding.
- Book binding.
- Gathering.
- The cutting and trimming of miscellaneous work in building.
- Perforating and punching.

### Disbursement Clerk:

The duties of the disbursement clerk would be as follows:

- The handling of disbursements of supplies to general offices.
- [fol. 8089] The receiving and distributing of mail.
- The issuing of stationery back orders.
- The issuing of notices of disbursements of numbered orders to Automobiles, Purchasing, and Stores Department.
- The recording of shipments of all numbered orders or contracts.
- The recapping of disbursements daily.
- The compiling of records of field shipments.
- The checking monthly of stationery disbursements and receipts statements.



## Shipping Clerk:

The securing of approval on field requisitions.

The filling, writing-up, wrapping, and stamping of field orders.

The assisting at window of disbursements.

Going to the post office in the afternoon with shipments.

The making of stamp reports daily and monthly.

The shaving of cylinders for dictaphone.

Putting stock in bins.

The receiving and unpacking of freight and express shipments.

## Schedule of Salaries

Assisting purchasing agent (Supervisor) Three years, six months \$350 per month .....	\$14,700
Chief clerk, Three years, six months \$200 per month .....	8,400
Secretary and order clerk, Three years, six months \$150 per month .....	6,300
Multigraph operator (Chief), Three years, six months \$175 per month .....	7,350
Stock record and disbursement clerk, Three years, six months \$125 per month .....	5,250
Assistant multigraph and mimeograph operator, Three years, four months \$100 per month .....	4,000
Disbursement clerk, Three years, three months \$90 per month .....	3,510
Shipping clerk, Three years, two months \$75 per month .....	2,850
<b>Total</b> .....	<b>\$52,360</b>

## Stationery and Office Supplies

Based upon the actual experience of the department during the construction periods of 1927 and 1929, the expenses of the Stationery Department for stationery and office supplies would be as follows:

[fols. 8090-8091]

Pre-construction period .....	\$490.00
Construction period .....	1,803.00
<b>Total</b> .....	<b>\$2,293.00</b>

## Transportation

No transportation cost would be incurred in the reproduction of Lone Star Gas Company.

### Traveling Expenses

The traveling expenses of the department have been estimated at \$525.00 for the three and one half year period.

Total .....	\$525.00
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### Communication

The communication expenses of the department have been estimated as follows:

Telephones—exchange service .....	\$1,529.00
Dictograph .....	700.00
Telephone tolls .....	1,470.00
Telegraph tolls .....	630.00
Total .....	<u>\$4,329.00</u>

[fol. 8092]      Traffic Department

### Summary of Salaries and Expenses

#### Salaries:

Pre-Construction period .....	\$1,275	
Construction period .....	22,500	
	<u>          </u>	\$23,775

#### Office Furniture and Fixtures:

Depreciation based on total cost of \$541 as shown by detailed inventory .....	151
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#### Stationery and Supplies:\*

Stationery and supplies .....	512
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#### Transportation:

Pre-Construction period .....	\$250	
Construction period .....	750	
	<u>          </u>	1,000

#### Communication:

Pre-Construction period .....	\$28	
Construction period .....	80	
	<u>          </u>	108

Total .....	<u>\$25,546</u>
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\* Includes Interstate Commerce Commission Reports, advance copies Interstate Commerce Commission Reports, and one Hawkins' Digest.



(NOTE.) Office rent is included under Undistributed General Costs. The estimated net floor space that would be required for the Traffic Department is 420 square feet.

#### Duties of the Department and Personnel Analysis:

This department would report directly to the purchasing agent.

Transportation matters, particularly freight rates and routing, are intricate, therefore, trained, experienced technical man would be required. Traffic management would be essential in the economical reproduction of Lone Star Gas Company. "It is basic and fundamental to the elimination of industrial waste incident to transportation; it is recognized as indispensable to large concerns; and it renders many valuable but immeasurable services to all departments which alone justify its maintenance". (Industrial Traffic Management Survey by U. S. Department of Commerce \* \* \* Domestic Commerce Series No. 39.)

The Traffic Department's main contact would be with transportation agencies, also State and Federal Transportation Regulatory Bodies, with which matters covering freight rate adjustments would be handled.

#### Traffic Manager:

The specific duties of the traffic manager would be:

The supervision of the work of the Traffic Department.

The obtaining of new rates and ratings.

The obtaining of revisions in tariffs and regulations.

The securing of rate and classification adjustments or the prevention.

The determination of available freight routings and other modes of transportation.

The routing of shipments.

The responsibility for company paying just and reasonable transportation.

The quoting of rates.

The assembling of evidence for rate cases.

The filing of informal, formal, and special docket complaints.

The practice before carrier and governmental regulatory bodies.

The preparation and filing of briefs for traffic cases.

- The preparation of claims for loss and damage.
- The keeping of executives and others informed of current traffic changes.
- The arranging of average demurrage agreements.

#### Rate Clerk:

The specific duties of the rate clerk would be as follows:

- The routing of shipments.
- The checking of freight bills for proper charges.
- The tracing of shipments.
- The securing of tariffs and classifications, and the maintenance of tariff file.
- The assisting of the traffic manager in preparation of claims.
- The studying of tariffs and keeping informed of rate changes.
- The handling of diversion, or reconsignments of shipments.
- The checking of transportation items on invoices.

#### fols. 8094-8095] Secretary:

- The specific duties of the secretary would be:
- The taking of dictation and writing of letters.
- The handling of requisitions for supplies.
- The maintenance of correspondence and claim files.
- The recording of claims in claim register.
- The recording of checks in payment of claims.
- The following up of open claims.
- The securing of freight bills and invoices to support claims.
- The typing of exhibits and statements in rate cases.

#### Schedule of Salaries

Position	Monthly Rate	Annual Rate
Traffic manager .....	\$300	\$3,600
Rate clerk .....	200	2,400
Secretary .....	125	1,500

#### Stationery and Office Supplies

Based upon the actual experience of the department, the expenses of the Traffic Department for stationery and office

2772

supplies for the three and one half years have been estimated as follows:

Office supplies .....	\$200.00
Interstate Commerce Commission reports .....	256.50
Advance copies \$10.00 per year .....	30.00
One Hawkins' Digest .....	25.00
<b>Total</b> .....	<b>\$511.50</b>

#### Transportation and Traveling Expenses

The transportation and traveling expenses of the Traffic Department for the three and one half year period have been estimated at \$1,000.00.

<b>Total</b> .....	<b>\$1,000.00</b>
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#### Communication

The communication expense of the Traffic Department has been estimated at \$108.00.

<b>Total</b> .....	<b>\$108.00</b>
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[fol. 8096]      Other General Costs

#### General Summary

Office building costs .....	\$134,820
Compensation insurance .....	9,487
Mail room expense .....	11,550
Certification of expenditures .....	35,000
Fidelity bond expense .....	10,717
<b>Total</b> .....	<b>\$201,574</b>

[fol. 8097]

#### Summary of Costs

##### Pre-Construction Period:

Office building costs .....	\$19,260
Compensation insurance .....	1,357
Mail room expense .....	1,650
Certification of expenditures .....	5,000
Fidelity bond expense .....	1,531
<b>Total</b> .....	<b>\$28,798</b>

## Defendant's Exhibit No. 28—Continued

## Construction Period—First Year:

Office building costs.....	\$38,520
Compensation insurance .....	2,710
Mail room expense.....	3,300
Certification of expenditures.....	10,000
Fidelity bond expense.....	3,062
Total .....	<u>\$57,592</u>

## Construction Period—Second Year:

Office building costs.....	\$38,520
Compensation insurance .....	2,710
Mail room expense.....	3,300
Certification of expenditures.....	10,000
Fidelity bond expense.....	3,062
Total .....	<u>\$57,592</u>

## Construction Period—Third Year:

Office building costs.....	\$38,520
Compensation insurance .....	2,710
Mail room expense.....	3,300
Certification of expenditures.....	10,000
Fidelity bond expense.....	3,062
Total .....	<u>\$57,592</u>

[fol. 8098]

Immediately upon the completion of corporate organization, steps would be taken to provide suitable quarters for the executives and the various departmental sections that would function throughout the pre-construction and construction periods. This would be done either by the rental of office space, the construction of permanent quarters, or by the purchase of a suitable structure.

Inasmuch as Lone Star Gas Company owned a general

office structure as of January 1, 1933, the most practical method of estimating the cost of rent during the pre-construction and construction periods is to assume that the company would acquire this building at the date of incorporation, and to fix the cost of rent upon the basis of historical operating costs including taxes and depreciation. The interest charges upon the reproduction cost of the building, and the fair market value of the land have been included in the cost of Interest During Construction and are therefore omitted from the estimate of rental charges.

The floor space required for each department that would be engaged in reproduction has been separately determined in the subsequent analyses. The aggregate floor space required indicates the necessity for the use of the entire building throughout the pre-construction and construction periods. For this reason, the cost of rent has not been segregated, but is included in the estimate as a general undistributed charge.

The General Office Structure and the General Office land owned by Lone Star Gas Company as of January 1, 1933 consisted of a ten story and basement office building, the land upon which the building is located and an adjoining lot seventy feet by ninety three feet used and useful for the [fol. 8099] purpose of parking company owned automobiles. The structure is properly designed for the purpose of accommodating the organization during construction and the use of the parking lot would be essential.

The original cost of the land and the estimated reproduction cost of the building and its integral equipment as of January 1, 1933 were as follows:

General office land .....	\$44,545.00
Parking lot land .....	18,052.00
General office structure .....	321,438.00
<b>Total .....</b>	<b>\$384,035.00</b>

The General Office Structure has available for use the following areas, exclusive of elevator shafts, janitor's closets and lavatories, but inclusive of all corridors:



## Defendant's Exhibit No. 28—Continued

First Floor	Square Feet
Space 1—315 South Harwood Street*	1,132.75
Space 2—313 South Harwood Street*	1,412.43
Space 3—311 South Harwood Street	1,401.75
Space 4—309 South Harwood Street	1,201.50
Space 5— Inside	475.23
Lobby	806.09
Total area nine floors 9 x 5,507.25	
Square feet—area each typical floor	49,565.25
Total: Area exclusive of basement	55,995.00
Total: Area exclusive of basement, lobby and rentable area	52,043.73

## \*Rentable.

The average operating expenses of the General Office Structure including an annual charge of three per cent for depreciation on the reproduction cost for the years 1929, and 1930, are shown in the following tabulation. The operating expenses for the year 1933 could not be used due to the fact that certain inter-building charges were made between Lone Star Gas Company, and Dallas Gas Company during 1933 which would not be definitely segregated.

[fol. 8100] Item	Amount 1929	Amount 1930	Average Amount
Repairs to Machinery	\$109	\$286	\$198
Repairs to Building	577	100	339
Light and Power	4,219	4,995	4,607
Building Engineer and Helper	3,763	3,809	3,786
Water	342	373	358
Fuel	1,782	1,667	1,725
Insurance	1,158	1,251	1,205
Towel Supply	503	313	408
Miscellaneous Supplies	877	1,243	1,060
Light Globes and Electrical Equipment	130	192	161
Lubricating Oils	6	14	10
Janitor Service	8,292	9,237	8,765
Miscellaneous Tools	175	244	210



## Defendant's Exhibit No. 28—Continued

Item	Amount 1929	Amount 1930	Average Amount
Advalorem Taxes (1932):			
Office Building and Site .....			\$6,851
Parking Lot .....			288
Furniture and Fixtures .....			346
Depreciation 3% on \$321,438 .....			9,643
Total Annual Charges .....			<u>\$39,960</u>
Less: Rentals .....			1,440
Net Annual Charges .....			<u><u>\$38,520</u></u>

## Office Building Costs—By Periods

Pre-Construction Period .....	\$19,260
Construction Period—First Year .....	38,520
Construction Period—Second Year .....	38,520
Construction Period—Third Year .....	38,520

The office building would be used for construction in housing the personnel of some sections during the Post-Construction Period. It is assumed, however, that this construction charge would be offset by the fact that the building would not be fully occupied until the beginning of the First Construction Year.

## Compensation Insurance

The annual rate for compensation insurance for office employees as of January 1, 1933 was eight cents for each one hundred dollars of payroll. For engineers engaged in field work, the manual rate was \$1.21 for each one hundred dollars of payroll.

[fol. 8101] The salaries for the various sections, as determined by the analyses are as follows:

## Defendant's Exhibit No. 28—Continued

Executive Section .....	\$397,925
Legal Section .....	138,120
Accounting Section .....	159,461
Treasury Section .....	87,925
Land Section .....	184,200
Geological Section .....	160,050
Purchasing Section .....	399,560
Engineering Section (Office) .....	670,066
Supervision .....	516,050
Other General Costs .....	11,550

Total .....	<u>\$2,724,907</u>
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Engineering Section (Field) .....	<u>\$603,895</u>
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Office Salaries \$2,724,907 at 8 cents per \$100.00 .....	\$2,180
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Field Engineer's Salaries \$603,895 at \$1.21 per \$100.00 .....	7,307
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Total .....	<u>\$9,487</u>
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## Compensation Insurance—by Periods

Pre-Construction Period .....	\$1,357
Construction Period—First Year .....	2,710
Construction Period—Second Year .....	2,710
Construction Period—Third Year .....	2,710

## Mail Room Expense

The mail room personnel would be composed of one head clerk and two assistant clerks. They would be employed throughout the Pre-Construction and Construction Periods. Their salaries would be as follows:

Chief Clerk .....	\$1,500 per annum
Assistant Clerk .....	900 per annum
Assistant Clerk .....	900 per annum

## Mail Room Expense by Periods:

Pre-Construction Period .....	\$1,650
Construction Period—First Year .....	3,300
Construction Period—Second Year .....	3,300
Construction Period—Third Year .....	3,300

## [fol. 8102]      Certification of Expenditures

The provisions of any mortgage under which funds would be advanced for the construction of the Property of Lone Star Gas Company, would require that all expenditures for construction and other general charges be checked and certified to by some independent auditing firm of national recognition. The minimum fee for such services as could be required in the reproduction of Lone Star Gas Company would be not less than \$10,000 per annum. This fee would be paid by the company; although the auditing firm would be selected by the trustee.

## Certification of Expenditures Costs by Periods:

Pre-Construction Period .....	\$5,000
Construction Period—First Year .....	10,000
Construction Period—Second Year .....	10,000
Construction Period—Third Year .....	10,000

## Fidelity Bond Expense

In the reproduction of the property and business of Lone Star Gas Company, it would be necessary for the company to be insured against fidelity losses by a Primary Blanket Fidelity Bond which would embrace the company's bondable employees. These bondable employees would be divided into three classes, A, B, and C, which are defined as follows:

“Class A—Executives, officials and all Employees who, as a part of their regular duties, Handle or Have Custody of Money; Securities or Merchandise, including in any event auditors, assistant auditors, adjustors, purchasing agents, buyers, managers, assistant managers, branch managers, superintendents, bookkeepers, cashiers, outside salesmen, shipping or receiving clerks, stock clerks, outside messengers, paymasters, timekeepers and collectors.”

“Class B—Employees, other than those included in Classes A and C, Who Do Not, as a part of their regular duties, Handle or Have Custody of Money, Securities or Merchandise, including in any event inside salesmen, inside messengers, office and filing clerks, mail clerks, stenographers, typists, business machine operators, telephone switchboard operators, janitors and porters.”

"Class C—Wage earners (including foremen, factory workers, mechanics and laborers) Who Do Not, as a part of their regular duties, Handle Money."

It is estimated that an average of 80 employees would be embraced in Class A, an average of 250 in Class B, and a substantially larger number in Class C. A coverage of not less than \$200,000 would be required for proper security of funds. The annual premium on a bond of this amount would be \$3,063.

#### Fidelity Bond Expense—by Periods:

Pre-Construction Period .....	\$1,531
Construction Period—First Year .....	3,062
Construction Period—Second Year .....	3,062
Construction Period—Third Year .....	3,062

[fol. 8105]

#### Summary

#### General Engineering Costs

##### First Year:

General Payroll, Travelling Expenses and Fees .....	\$246,646.60
Office and Field Equipment, Supplies and Expenses .....	17,478.72
Field Payroll and Expenses .....	239,242.72
	<hr/>
	\$503,368.04

##### Second Year:

General Payroll, Traveling Expenses and Fees .....	173,824.00
Office and Field Equipment, Supplies and Expenses .....	11,354.51
Field Payroll and Expenses .....	181,868.07
	<hr/>
	367,046.58

##### Third Year:

General Payroll, Traveling Expenses and Fees .....	126,659.00
Office and Field Equipment, Supplies and Expenses .....	6,985.12
Field Payroll and Expenses .....	105,622.25
	<hr/>
	239,266.37

## Defendant's Exhibit No. 28—Continued

## Fourth Year:

General Payroll and Traveling Expenses .....	\$17,700.00	
Office Equipment, Supplies and Expenses .....	280.19	
		<u>\$17,980.19</u>

Grand Total—General Engineering Costs .....	\$1,127,661.18
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[fols. 8106-8109]

## Summary

## Reproduction Cost of Final Engineering Records

## Second Year:

General Payroll and Travelling Expenses .....	\$136,320.00	
Office and Field Equipment, Supplies and Expenses .....	11,231.00	
Field Payroll and Expenses .....	198,751.15	
		<u>\$346,302.15</u>

## Third Year:

General Payroll and Travelling Expenses .....	88,659.60	
Office and Field Equipment, Supplies and Expenses .....	7,991.59	
Field Payroll and Expenses .....	156,484.80	
		<u>253,135.99</u>

## Fourth Year:

General Payroll and Travelling Expenses .....	68,307.00	
Office and Field Equipment, Supplies and Expenses .....	9,389.71	
Field Payroll and Expenses .....	88,555.50	
		<u>166,252.21</u>

Grand Total—Reproduction Cost of Final Engineering Records .....	\$765,690.35
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(NOTE.) The Reproduction Cost of Final Engineering Records are included as a part of Direct Structural Costs, Volume I, of this report.

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[fol. 8110] General Engineering Costs and Reproduction  
Cost of Final Engineering Records

Definition:

As used in this estimate of the reproduction cost of the property and business of Lone Star Gas Company, General Engineering Costs and Reproduction Cost of Final Engineering Records are intended to cover the fees and expenses of consultants, the salaries and expenses of the chief engineer, the office engineers, assistant engineers, draftsmen, designers, photostat and blue print operators, clerks and stenographers from the date of the incorporation of the company until such time as the permanent engineering records in possession of Lone Star Gas Company as of January 1, 1933, would be completed. Also the cost of all supplies, office rent or its equivalent cost, tolls, telephones and telegrams, automobile expenses, insurance on employees, bonding expenses, depreciation on furniture, fixtures and equipment, and other expenses that would be incurred in the design of the constituent items of property, the preparation and maintaining of engineering records, and in the general engineering supervision of construction.

This estimate of general engineering does not include the engineering costs that would be incurred prior to the incorporation of the company and specifically treated in connection with Preliminary Development Costs, special fees paid for the design of special structures and included in the physical cost of these structures, and engineering costs directly charged to specific property accounts in the estimate of the structural costs of the physical property of Lone Star Gas Company as of January 1, 1933.

[fol. 8111] Schedule of Engineering Work:

The work that would be done by the engineering section in the reproduction of Lone Star Gas Company as of January 1, 1933, would require four years for completion. There would be three years of preliminary engineering and three years of final engineering. For two years the preliminary engineering and final engineering would be carried on concurrently.

The preliminary engineering work would be done prior to and for the construction. The final engineering work would be done after construction for permanent records, and for the operation of the property.



The first year of engineering would consist of the first year of preliminary engineering and would start six months before actual construction begins.

The Second year of engineering would consist of the second year of preliminary engineering and the first year of final engineering.

The third year of engineering would consist of the third year of preliminary engineering and the second year of final engineering.

The fourth year of engineering would consist of the third year of final engineering and would be completed six months after construction.

The schedule as above outlined is shown in graphic form in Chart of Distribution of Engineering as Related to the Construction Period.

#### Organization Plan, Duties of the Section, and Personnel Analysis:

The employment of the chief engineer and the office engineer would follow immediately upon the completion of cor-[fol. 8112] porate organization and the selection of the executive officers of the company.

The chief engineer and the office engineer would be furnished with copies of the preliminary engineering reports prepared for the operating group and would be advised by the general manager as to the plans of the management and the general scope and nature of the project. With this information in hand they would work out an organization covering the necessary personnel for the General Engineering Section.

The personnel indicated by the general engineering chart would be employed immediately.

The chief engineer would report to the vice president and general manager and to the general superintendent. He would supervise the work of the engineering organization, consult with and advise the heads of all construction groups in emergency matters, contact and retain all necessary consultants and specialists whose services would be required in the design and construction of the entire property and visit the various points on the property during construction when his judgment and advice would be required.

The secretary for the chief engineer would be a man of experience in order to properly handle the chief engineer's

correspondence, keep such files as the chief engineer would require to be at hand, interview callers in the chief engineer's absence, and similar duties that would arise.

The office engineer would report to the chief engineer. He would supervise and co-ordinate the work of the statistical engineer, field engineers, designing engineer, and the chief draftsman. He would contact and consult with the various department heads and assistant department heads in order [fol. 8113] to obtain such material, information and data as would be required from them by the engineering organization.

The remaining personnel of the engineering organization would consist of four groups, as follows:

The statistical engineers group which would consist of computers, inventory men, and stenographers.

The computers would receive the necessary data from the field engineers and make all calculations for line sizes in order to obtain the proper size lines in order to deliver the required gas at the points of delivery and maintain proper operating conditions. They would figure all material for pipe lines, telephone lines, compressor stations, measuring and regulating stations, and all other structures required to complete the property. They would prepare estimates of all units, write descriptions for all lands to be purchased or leased (except mineral leases), assemble all data for staking well locations and making lease surveys, and they would calculate all lease acreage and check all lease descriptions of the mineral leases for the Land and Lease Department.

The inventory men would keep daily progress of all construction on maps and forms prepared for that purpose; they would prepare a weekly report, summarize the progress of all construction, and charts to accompany same; they would keep a permanent detailed record of all pipe lines, including the length, size, type, date of completion, and date of final inventory; they would keep a permanent record of all leases purchased, including the lease number, name of lessor, area, county in which the lease is located, size of plat and by whom platted in case a plat had been made, name of the survey party and date of survey in case a survey had been made, and such other data pertaining to the leases; and they [fol. 8114] would keep an up to date summary book showing the total amounts of pipe laid by sizes and kinds, as well as preparing a statement at the end of each period, giving the same information.

The stenographers would type all requisitions for material to be used in construction which would include checking the purchase orders and material received reports with the original requisitions to avoid discrepancy; they would type all descriptions prepared by the computers for all necessary sites to be secured; they would type all estimates of cost of construction prepared by the computers; they would type all correspondence with the field engineers and surveying parties, and other miscellaneous correspondence and office work; they would type all progress reports of construction, and also all pipe line statements; and one of the stenographers would keep files (except the filing of notes and drawings mentioned later) of the engineering department.

The group of field engineers would count and locate the houses in the communities under consideration for service, and classify the probable consumers as to probable consumption.

They would supervise the work of the survey parties, contact all field organization in order to correlate the engineering departments field work with the other groups in order to obtain an efficient and prompt dispatch of all work done in connection with the other groups, make reconnaissance surveys, supervise the bridge inspectors, and do all other work of this character that might become necessary.

One group of designers under the supervision of the designing engineer would furnish all necessary data to the draftsmen for the drawing up of all plans, write all specifications [fol. 8115] for the construction of all plants and structures, and interview the representatives of the manufacturers of all equipment that would be considered for all plants and structures.

Another group would work under the supervision of the chief draftsman, who would have such assistants as would be necessary for the proper supervision of this group. This group would consist of draftsmen, file clerks, blueprint operators, and a photostat operator. This group would draw all maps, plans and charts, maintain files of all drawings and notes, correspondence, and data used in the preparation of the drawings, mount the system map as the sheets were made, make blueprints, photostat prints, and keep a set of maps posted to date for the general superintendent, chief engineer, production superintendent, and the superintendent of the Lease Department.

## Defendant's Exhibit No. 28—Continued

## Schedule of Salaries

	Month	Year
Chief Engineer .....	\$1,000	\$12,000
Office Engineer .....	400	4,800
Chief Draftsman .....	300	3,600
Designing Engineer .....	300	3,600
Field Engineer (Head of group) .....	300	3,600
Statistical Engineer .....	300	3,600
Assistant Chief Draftsman (Head) .....	275	3,300
Field Engineers .....	275	3,300
Designers .....	250	3,000
Assistant Chief Draftsman .....	250	3,000
Computers .....	200	2,400
Secretary for Chief Engineer .....	175	2,100
Draftsman (Average) .....	170	2,040
Inventory men .....	170	2,040
Photostat operator .....	160	1,920
Blueprint operator .....	160	1,920
Blueprint Photostat helper .....	150	1,800
File Clerk (Head of group) .....	150	1,800
Stenographer (Head of group) .....	135	1,620
File Clerks .....	125	1,500
Stenographers .....	125	1,500
Car cost .....	175	2,100
Expenses per man .....	125	1,500

Helpers employed locally by field engineers to assist in house counting \$4.00 per day.

## [fol. 8116] Schedule of Salaries

	Month	Year
Chief Engineer .....	\$1,000	\$12,000
Office Engineer .....	400	4,800
Chief Draftsman .....	300	3,600
Designing Engineer .....	300	3,600
Field Engineer (Head of Group) .....	300	3,600
Statistical Engineer .....	300	3,600
Assistant Chief Draftsman (Head of Group) .....	275	3,300
Field Engineers .....	275	3,300

## Defendant's Exhibit No. 28—Continued

	Month	Year
Designers .....	250	3,000
Assistant Chief Draftsman .....	250	3,000
Computers .....	200	2,400
Secretary of Chief Engineer .....	175	2,100
Draftsmen (Average) .....	170	2,040
Inventory men .....	170	2,040
Photostat operator .....	160	1,920
Blueprint operator .....	160	1,920
Blueprint-Photostat helper .....	150	1,800
File Clerk (Head of Group) .....	150	1,800
Stenographer (Head of Group) .....	135	1,620
File Clerks .....	125	1,500
Stenographers .....	125	1,500
Car cost .....	175	2,100
Expenses per man .....	125	1,500

Helpers employed locally by field engineers to assist in house counting—\$4.00 per day.

[fol. 8117]

First Year Engineering

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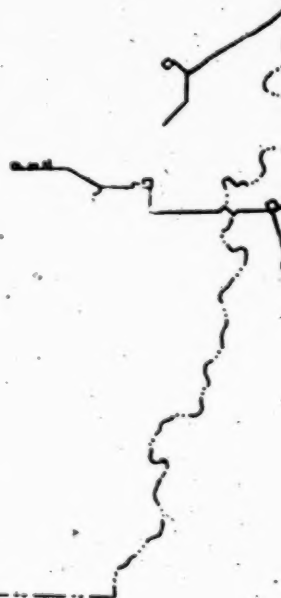
8118

LONE STAR GAS CO.  
-CONSTRUCTION PERIOD-  
FIRST YEAR

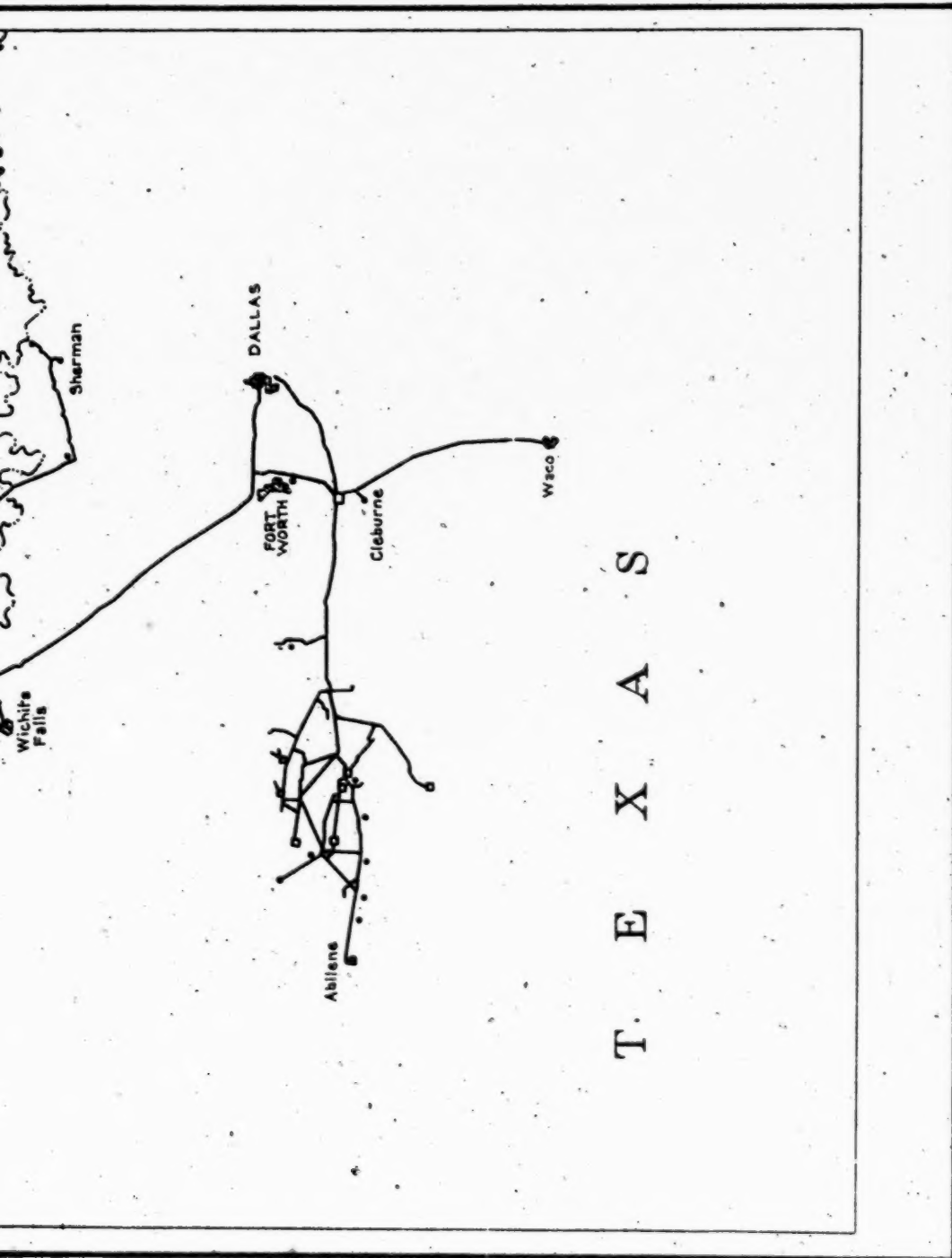
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## Defendant's Exhibit No. 28—Continued

## [fol. 8119] Payroll for First Year of Engineering

## General Engineering Cost

Chief Engineer .....	\$12,000.00	
Secretary of Chief Engineer .....	2,100.00	
Office Engineer .....	4,800.00	
	<hr/>	\$18,900.00
Statistical Engineer .....	3,600.00	
Computers 8.06 at \$2,400.00 .....	19,344.00	
Inventory men—2.33 at \$2,040.00 .....	4,753.20	
Stenographer (Head of Group) .....	1,620.00	
Stenographers—2.83 at \$1,500.00 .....	4,245.00	
	<hr/>	33,562.20
Field Engineers (Head of Group) .....	3,600.00	
Field Engineers—3.58 at \$3,300.00 .....	11,814.00	
	<hr/>	15,414.00
Designing Engineer .....	3,600.00	
Designers 5.40 at \$3,000.00 .....	16,200.00	
	<hr/>	19,800.00
Chief Draftsman .....	3,600.00	
Ass't Chief Draftsman (Head of Group) .....	3,300.00	
Ass't Chief Draftsmen 2.32 at \$3,000.00 .....	6,960.00	
Draftsmen 49.76 at \$2,040.00 .....	101,510.40	
File Clerk (Head of Group) .....	1,800.00	
File Clerks 2.12 at \$1,500.00 .....	3,180.00	
Photostat Operator .....	1,920.00	
Blueprint Operator .....	1,920.00	
Blueprint-Photostat Helper .....	1,800.00	
	<hr/>	125,990.40
Car Cost 5.58 at \$2,100.00 .....	11,718.00	
Expenses 5.58 men at \$1,500.00 .....	8,370.00	
Helpers counting houses—723 days at \$4.00 .....	2,892.00	
Consulting Fees .....	10,000.00	
	<hr/>	
Total .....		<u>\$246,646.60</u>

## Defendant's Exhibit No. 28—Continued

[fol. 8120]

## Engineering Personnel Required for the First Year of Engineering

## General Engineering Cost

Chief Engineer.....	Entire year
Secretary of Chief Engineer.....	Entire year
Office Engineer.....	Entire year
Statistical Engineer.....	Entire year
Computers as shown in detail.....	16,156 Hours
Plus 10% Omissions and Contingencies.....	1,616
Total.....	17,772 Hours
17,772 divided by 2206 = 8.06 Computer years	
Inventory men as shown in detail.....	4,667 Hours
Plus 10% Omissions and Contingencies.....	467
Total.....	5,134 Hours
5,134 divided by 2206 = 2.33 Inventory men years	
Stenographers as shown in detail.....	7,683 Hours
Plus 10% Omissions and Contingencies.....	768
Total.....	8,451 Hours
8,451 divided by 2206 = 3.83 Stenographer years	
Field Engineers	
Survey Party days as shown in detail.....	3,314 Days
3,314 divided by 3 = 1105 Field Engineering Days	
Field Engineer Days.....	1,105 Days
Obtaining data for calculating Pressure and Volumes, etc.....	63
Total.....	1,168 Days
1,168 divided by 255 = 4.50 Field Engineer Years	
Designing Engineers.....	Entire year
Designers as shown in detail.....	10,822 Hours
Plus 10% Omissions and Contingencies.....	1,082
Total.....	11,904 Hours
11,904 divided by 2206 = 5.40 Designer Years	

[fol. 8121]

Chief Draftsman.....	Entire year
Assistant Chief Draftsman—1 for each 15 Draftsmen	
Draftsmen years.....	49.76 years
49.76 divided by 15 = 3.32 Assistant Chief Draftsmen years	
Draftsmen as shown in detail.....	99,783 Hours
Plus 10% Omissions and Contingencies.....	9,978
Total.....	109,761 Hours

## Defendant's Exhibit No. 28—Continued

109,761 divided by 2206 = 49.76 Draftsmen Years

File Clerks—1 for each 15 Draftsmen

49.76 divided by 15 = 3.32 File Clerk Years

Photostat Operator.....	Entire year
Blueprint Operator.....	Entire year
Blueprint-Photostat Helper.....	Entire year

(NOTE.) In the estimated man years for computers, inventory men, stenographers, designers and draftsmen, 2206 hours of work per man per year has been used as effective. This figure was obtained as follows:

Days per year.....	365.00
Sundays.....	52.00
Saturdays 52 half days or.....	26.00
Holidays.....	7.00
Time lost account of sickness (1930 and 1931 experience).....	4.25
	<hr/> 89.25
Effective Days.....	<hr/> 275.75

275.75 at 8 hours per day..... 2,206.00 Hours

(NOTE.) In the estimated man days for field engineers 255 days of work per man per year has been used as an effective year. This figure was obtained as follows:

Days per year.....	365.00
Sundays.....	52.00
Saturdays 52 half days or.....	26.00
Holidays.....	7.00
Sickness.....	4.00
Bad weather and travelling.....	21.00
	<hr/> 110.00
Effective Days.....	<hr/> 255.00

[fol. 8122]

## First Year Details

(NOTE.) In connection with all details wherein quantities are designated Preliminary and Final, in each of the three years the Preliminary quantities are applicable to the engineering year under which they are shown while the Final quantities are applicable to the following years engineering.

For example, in the detail of First Year Statistical Engineer, the preliminary time spent by inventory men is applicable to the first year's engineering while the final time for inventory men shown in detail of First Year Statistical Engineer is applicable to second year's engineering.



## Defendant's Exhibit No. 28—Continued

[fol. 8123]

## First Year Statistical Engineer

	Computers Prelim.	Inventory Prelim.	Men Final	Stenographers Prelim.	Final
K Line system including telephone line, bridges and other structures	671	678	71	495	153
J Line system including telephone line and other structures	133	61	7	54	17
O Line system including telephone line and other structures	430	256	50	265	72
L Line system including all structures	79	85	5	46	16
B Line system including telephone line and other structures	242	214	10	125	54
C Line system including telephone line and other structures	205	73	5	70	27
H Line system including telephone line, bridges and other structures	948	288	23	314	83
A Line system including telephone line and other structures	76	34	5	38	10
G Line system including telephone line, bridges and other structures	297	252	20	239	60
E Line system including all structures	119	86	12	59	15
Numbered line system including all structures	737	476	104	475	93
All Well Lines	2028	808	733	1012	226
Railroad crossings, checking and transmitting preliminary alignments	134	....	....	226	....
Miscellaneous fuel, water, and telephone lines	75	20	35	60	18
Mineral Wells, Joshua, Comanche, Moran and Eastland Warehouses	459	60	....	116	25
Dallas Machine Shop, Lakes and Pump Station	497	118	....	241	29
Leases and gas purchase contracts	1280	327	....	30	....
Miscellaneous main line sale measuring station	38	15	....	17	4
Petrolia Compressor Station	1748	126	....	439	85
Gas City Compressor Station	526	55	....	225	28
Fox Central Compressor Station	907	72	....	286	37
Joshua Compressor Station	1123	117	....	467	84

[fol. 8124]

Caddo Compressor Station	476	72	....	225	41
Breckenridge Compressor Station	586	61	....	260	42
Ibex Compressor Station	490	72	....	228	40
Ranger No. 3 Compressor Station	615	62	....	263	47
Ranger No. 4 Compressor Station	375	52	....	163	21
Pueblo Compressor Station	406	55	....	202	45
Sipe Springs Compressor Station	456	72	....	218	40
Filing (All Engineering Department except notes and drawings)	....	....	....	550	550
Total Hours	16,156	4,667	1,080	7,683	1,958

## Defendant's Exhibit No. 28—Continued

[fol. 8125] House Count and All Other Data for Calculating Loads

## First Year

Town	Field Engr. days	Number of Helpers	Helpers Man Days
Abilene	3	9	27
Albany	1	2	2
Baird	1	2	2
Cleburne	2	9	18
Clyde	1	1	1
Dallas	14	16	224
Denison	2	10	20
Eastland	2	3	6
Fort Worth	14	18	252
Moran	1	1	1
Putnam	1	1	0
Sherman	2	10	20
Waco	4	9	36
Wichita Falls	4	8	32
Gainesville	1	7	7
Cisco	1	9	9
Brazos	1	0	0
Sedwick	1	0	0
Forrest Hill	1	0	0
Total	57		657

Plus 10% for investigating towns and communities that would not be served

6	66
Total	723

## Defendant's Exhibit No. 28—Continued

## [fol. 8126] First Year Surveying Party Days

	Prelim.	Final
K Line system including telephone lines, bridges, and other structures .....	434	304
J Line system including telephone lines, and other structures .....	31	35
O Line system including telephone lines, and other structures .....	145	143
L Line system including all structures .....	46	34
B Line system including telephone lines and other structures .....	113	108
C Line system including telephone lines, and other structures .....	46	55
H Line system including telephone lines, bridges, and other structures .....	296	165
A Line system including telephone lines, and other structures .....	17	21
G Line system including telephone lines, bridges, and other structures .....	261	119
E Line system including all structures .....	40	30
Numbered lines including all structures .....	228	186
All well lines, including all structures .....	66	452
Miscellaneous fuel, water and telephone lines .....	50	35
Mineral Wells, Joshua, Comanche, Moran, and Eastland Warehouses .....	12	50
Dallas Machine Shop, Lakes and Pump Stations .....	38	57
Leases .....	470	
Miscellaneous main line sale measuring stations .....		8
Petrolia Compressor Station .....	117	169
Gas City Compressor Station .....	51	57
Fox Central Compressor Station .....	63	74
Joshua Compressor Station .....	112	159
Caddo Compressor Station .....	58	82
Breckenridge Compressor Station .....	55	81
Ibex Compressor Station .....	53	80
Ranger Number 3 Compressor Station .....	63	95
Ranger Number 4 Compressor Station .....	31	42

## Defendant's Exhibit No. 28—Continued

	Prelim.	Final
Pueblo Compressor Station .....	60	90
Sipe Springs Compressor Station .....	57	79
	<hr/>	<hr/>
	3,013	2,810
Plus 10% Omissions and Contingencies .....	301	281
	<hr/>	<hr/>
Total .....	3,314	3,091

## [fol. 8127] First Year Designing Time

	Hours
Measuring stations .....	2,415
River Crossings .....	144
Warehouses, Pump Stations, and Camp Sites .....	1,273
Standard Drawings .....	814
Telephone Booths, and Miscellaneous Drawings .....	182
Petrolia Compressor Station .....	1,292
Gas City Compressor Station .....	409
Fox Central Compressor Station .....	675
Joshua Compressor Station .....	942
Breckenridge Compressor Station .....	351
Ibex Compressor Station .....	354
Caddo Compressor Station .....	434
Ranger Number 3 Compressor Station .....	481
Ranger Number 4 Compressor Station .....	287
Pueblo Compressor Station .....	378
Sipe Springs Compressor Station .....	391
	<hr/>
Total .....	10,822

[fols. 8128-8192]

## Maps, Plans, and Drawings—First Year

## Labor—Draftsmen Only

No.	Alignment Sheets Drawing	Size in Inches	Preliminary Hours	Final Hours
19	Line K—Ibex to Joshua .....	15.5x36	855	956
6	Line J—Joshua to C Line .....	15.5x36	270	304
8	Line O—Joshua to Dallas .....	15.5x36	400	440
11	Line L—Joshua to Waco .....	15.5x36	550	600
18	Line B—Petrolia to Fort Worth .....	15.5x36	850	950
18	Line B—Telephone Line .....	15.5x36	756	846
15	Line C—Fort Worth to Dallas .....	15.5x36	760	850
9	Line H—Gas City to Petrolia .....	15.5x36	380	468
8	Line H—Telephone Line .....	15.5x36	340	390
3	Line A—Petrolia to Wichita Falls .....	15.5x36	145	165
3	Line A—Telephone Line .....	15.5x36	110	132

## Defendant's Exhibit No. 28—Continued

No.	Alignment Sheets Drawing	Size in Inches	Preliminary Hours	Final Hours
14	Line KC—K Line to Abilene.....	15. 5x36	725	629
2	Line KC—Telephone Line.....	15. 5x36	94	104
11	Line G—Fox to Gainesville.....	15. 5x36	510	580
8	Line E—Gainesville to Denison.....	15. 5x36	200	409
1	Line E-1—Denison Tap.....	15. 5x36	45	52
2	Line E-2—Sherman Tap.....	15. 5x36	90	105
1	Line E-9—Gainesville Tap.....	15. 5x36	48	55
4	Line G-A.....	15. 5x36	180	202
8	Line G-B.....	15. 5x36	310	346
2	Line G-B-A.....	15. 5x36	93	105
1	Line G-C.....	15. 5x36	40	44
6	Line 2nd H.....	15. 5x36	244	285
1	Line HA.....	15. 5x36	40	46
2	Line HF.....	15. 5x36	90	104
1	Line 2nd HF.....	15. 5x36	45	52
1	Line HG.....	15. 5x36	47	54
1	Line HM.....	15. 5x36	44	50
1	Line HN.....	15. 5x36	40	47
1	Line HO.....	15. 5x36	60	70
1	Line HR.....	15. 5x36	35	40
2	Line HS.....	15. 5x36	76	87
1	Line HT.....	15. 5x36	46	50
1	Line HU.....	15. 5x36	42	45
1	Line J-8.....	15. 5x36	48	54
3	Line KA.....	15. 5x36	140	160
7	Line KB.....	15. 5x36	325	368
2	Line KB—Telephone Line.....	15. 5x36	80	92
4	Line KBA.....	15. 5x36	175	200
4	Line KBA—Telephone Line.....	15. 5x36	153	168
1	Line KBAA.....	15. 5x36	40	46
1	Line KBAB.....	15. 5x36	44	50
2	Line KBAC.....	15. 5x36	85	100
1	Line KBB.....	15. 5x36	44	50
1	Line GDB.....	15. 5x36	55	52
1	2nd H Telephone Line.....	15. 5x36	260	288

[fols. 8193-8194]

No.	Miscellaneous Drawings (Cont'd) Drawing	Size in Inches	Preliminary Hours	Final Hours
1	Standard Legend and location for Telephone Alignment Sheets.....	8.5x11	....	8
1	Standard for Revision Blocks on Alignment Sheets.....	8.5x11	....	10
1	Chart Showing injuries to Employees.....	8.5x11	....	12
1	Car Numbers.....	8.5x11	....	2
1	Standard for Company's name on Alignment Sheets.....	8.5x11	....	8
3	Details for System Maps.....	8.5x11	....	24
1	Location for Field Maps (West Texas Field).....	8.5x11	....	4
1	Location for Field Maps (Okla.).....	8.5x11	....	4
	Mounting System Map.....	....	96	....
	Total.....		99,873	83,898

## Defendant's Exhibit No. 28—Continued

[fol. 8195]

## General Expense

## Summary

## General Engineering Cost

Item	Amount
Office Equipment *	\$1,693.61
County Maps	942.50
Office and Field Supplies	5,962.71
Surveying Equipment Cost *	2,398.10
Telephones	712.80
Toll Charges	4,945.00
Telegrams	824.00
Total	\$17,478.72

\* Depreciation Only.

[fol. 8196]

## First Year Details

[fol. 8197] Engineering Department Office Equipment Cost—First Year

No. In Use	Item	Total Value Each	Total Value and Depreciation	Amount Charged to First Year
1	Golden oak desk—glass top 60 x 36 inches.....	\$79.10	\$79.10 at 8%	\$6.33
1	Golden oak desk—glass top 72 x 36 inches.....	58.50	58.50 at 8%	4.68
4	Golden oak swivel arm chairs—leather seat.....	22.00	88.00 at 8%	7.04
12	Golden oak arm chairs—straight.....	11.85	142.20 at 8%	11.38
5	Golden oak—4 section book cases with top and base....	43.90	219.50 at 8%	17.56
1	Golden oak telephone table....	10.80	10.80 at 8%	.86
15	Golden oak costumers.....	7.40	111.00 at 8%	8.88
9	Golden oak globe letter trays—single.....	1.60	14.40 at 8%	1.15
1	Rug—14 x 16 feet.....	212.50	212.50 at 8%	17.00
2	Smoking stands.....	6.34	12.68 at 8%	1.01
2	Shaeffer double fountain pen desk sets.....	20.00	40.00 at 8%	3.20
8	Golden oak system map frames	12.50	100.00 at 8%	8.00
2	Thermos bottles with tray and glasses.....	11.40	22.80 at 8%	1.82
58	Steel mesh waste baskets.....	.90	52.20 at 15%	7.83
2	Brass Cuspidors.....	2.07	4.14 at 8%	.33
59	Enameled steel cuspidors.....	.85	50.15 at 8%	4.01
61	Rubber cuspidor mats.....	.42	25.62 at 25%	6.40
10	Staffords self-inking stamp pads.....	.29	2.90 at 25%	.73



## Defendant's Exhibit No. 28—Continued

No. In Use	Item	Total Value Each	Total Value and Depreciation	Amount Charged to First Year
	Rubber stamps.....		\$45.75 at 20%	\$9.15
2	Bostich staple machines—executive type.....	\$7.50	15.00 at 8%	1.20
58	Autopoint Bakelite pencils....	.40	23.20 at 8%	1.86
12	Engineer's scales—12 inches...	3.24	38.88 at 8%	3.11
11	Architect's scales—12 inches...	3.24	35.64 at 8%	2.85
6	Polyphase duplex slide rules 10 inches in case.....	8.42	50.52 at 8%	4.04
5	Golden oak typewriter desks—60 x 34 inches.....	54.60	272.00 at 8%	21.84
5	Adjustable steel chairs—leather back and seat.....	17.43	87.15 at 8%	6.97
1	Golden oak settee—48 inches...	42.00	42.00 at 8%	3.36
18	Berloy steel filing cabinets....	27.30	491.40 at 8%	39.31
5	Royal standard typewriters...	83.03	415.15 at 8%	33.21
5	Remington Line-A-Times.....	21.00	105.00 at 8%	8.40
2	Globe letter trays—double....	4.00	8.00 at 8%	.64
4	Shaeffers single fountain pen desk sets.....	12.00	48.00 at 8%	3.84
1	Rug—10 x 14 feet.....	132.00	132.00 at 8%	10.65
[fol. 8198]				
2	Secretary's Handbooks.....	3.50	7.00 at 8%	.56
2	Dictionaries.....	5.00	10.00 at 8%	.80
30	Bostich Staple machines—standard.....	3.02	90.60 at 8%	7.25
5	Card Index cases.....	.60	3.00 at 8%	.24
1	Desk blotter holder.....	5.50	5.50 at 8%	.44
72	Sets alphabetical indexes for files.....	.95	68.40 at 25%	17.10
6	Dexter pencil sharpeners No. 2.	3.93	23.58 at 8%	1.89
1	Golden oak desk with glass top—66 x 36 inches.....	84.00	84.00 at 8%	6.72
1	Golden oak table with glass top—72 x 34 inches.....	58.00	58.00 at 8%	4.64
1	Rug—12 x 14 feet.....	158.70	158.70 at 8%	12.70
20	Golden oak desks—60 x 34 inches.....	54.60	1,092.00 at 8%	87.36
20	Golden oak swivel chairs—leather seats.....	18.50	370.00 at 8%	29.60
2	Golden oak tables—60 x 34 inches.....	30.80	61.60 at 8%	4.93
4	Golden oak chairs.....	7.50	30.00 at 8%	2.40
1	Planimeter.....	45.00	45.00 at 8%	3.60
3	Merchants Electric Calculators	425.00	1,275.00 at 8%	102.00
2	Walraven extension binders No. L-5840.....	7.20	14.40 at 8%	1.15
1	Walraven extension binder No. L-5888.....	8.44	8.44 at 8%	.67
4	Vance K. Miller Binders No. 541-A.....	1.25	5.00 at 8%	.40
1	Underwood Typewriter—26 inch carriage.....	137.70	137.70 at 8%	11.02
2	Golden oak tables—72 x 34 inches.....	35.00	70.00 at 8%	5.60
6	Sheridan Adjustable Drawing Tables No. 2263.5-B.....	65.00	325.00 at 8%	26.00
6	Golden oak desk chairs—Leather seat.....	18.50	111.00 at 8%	8.88

## Defendant's Exhibit No. 28—Continued

No. In Use	Item	Total Value Each	Total Value and Depreciation	Amount Charged to First Year
10	Tee Squares — Adjustable heads—42 inches.....	\$5.94	\$59.40 at 8%	\$4.75
10	45 Degree Triangles—18 inches.....	3.06	30.60 at 8%	2.45
10	30-60 triangles—18 inches.....	4.41	44.10 at 8%	3.53
	Steel Shelving.....		182.25 at 8%	14.58
54	Drafting tables—60 x 34 inches with drawers.....	26.25	1,417.50 at 8%	113.40
54	Adjustable wooden drafting stools.....	12.92	697.68 at 8%	55.81
50	Tee Squares—42 inches.....	2.86	143.00 at 8%	11.44
1	Globe Wernicke Filing Cabinet No. 7310-C.....	1.20	1.20 at 8%	.10
2	Beam Compasses in case.....	12.25	24.50 at 8%	1.96
[fol. 8199]				
3	Sets Proportional Dividers....	12.50	37.50 at 8%	3.00
1	Set Wrico Lettering Guides....	35.00	35.00 at 8%	2.80
4	Steel Straight edges—48 inches.....	7.56	30.24 at 8%	2.42
4	Vernier Protractors.....	9.00	36.00 at 8%	2.88
1	Golden oak tables—88 x 30 inches.....	48.50	48.50 at 8%	3.88
2	Hamilton File drawer bases 32 x 42 inches.....	6.00	12.00 at 8%	.96
13	Hamilton—5 drawer files 32 x 42 inches.....	28.50	370.50 at 8%	29.64
3	Hamilton File Drawer tops 32 x 42 inches.....	6.00	18.00 at 8%	1.44
1	Hamilton file drawer 32 x 42 inches with base.....	18.70	18.70 at 8%	1.50
1	Hamilton 1-file drawer 32 x 42 inches.....	12.00	12.00 at 8%	.96
1	Vertical steel map file.....	300.00	300.00 at 8%	24.00
1	Steel supply cabinet.....	32.00	32.00 at 8%	2.56
2	Pigeon hole horizontal map files.....	65.00	130.00 at 8%	10.40
1	Steel mesh waste basket, 30 inches high.....	3.15	3.15 at 15%	.47
7	File cases for scout tickets double.....	10.00	70.00 at 8%	5.60
4	Scissors—14 inches.....	3.75	15.00 at 20%	3.00
2	Step ladders—3 feet high.....	2.00	4.00 at 8%	.32
10	Oil cans — with spouts — for cleaning fluid.....	.25	2.50 at 20%	.50
1	Pease blueprint machine—54 inches.....	1,716.00	1,716.00 at 8%	137.28
1	Photostat machine—18 x 22 inches.....	1,188.00	1,188.00 at 8%	95.04
1	Paragon blueprint dryer 54 inches.....	759.00	759.00 at 8%	60.72
1	Pako Photo dryer.....	176.00	176.00 at 8%	14.08
2	Cooper-Hewitt mercury tube lights.....	80.00	160.00 at 8%	12.80
1	Photostat Washer.....	82.50	82.50 at 8%	6.60
1	Blueprint washer—54 inches.....	68.00	68.00 at 8%	5.44
1	Drying rack for negatives.....	41.80	41.80 at 8%	3.34
1	Blueprint table—45 x 66 inches.....	38.50	38.50 at 8%	3.08
1	Table—32 x 60 inches for dryer.....	3.85	3.85 at 8%	.31
1	Straight oak chair.....	5.00	5.00 at 8%	.40
1	Galvanized iron waste paper can.....	2.50	2.50 at 20%	.50

## Defendant's Exhibit No. 28—Continued

No. In Use	Item	Total Value Each	Total Value and Depreciation	Amount Charged to First Year
1	Blueprint paper can—8 x 55 inches.....	\$5.00	\$5.00 at 8%	\$ .40
1	Photo trimmer — Eastman — 18 x 18 inches.....	35.00	35.00 at 8%	2.80
[fol. 8200]				
2	Loose leaf folders 8.5 x 11 inches.....	.88	1.76 at 25%	2.80
1	Peice plate glass 24 x 30 Gr. edge	4.50	4.50 at 25%	1.13
4	Golden oak map cases.....	1,309.00	5,236.00 at 8%	418.88
1	No. 60 Marvel Punch.....	1.65	1.65 at 8%	.13
1	Improved Hummer punch with four heads.....	9.90	9.90 at 8%	.79
	Technical reference books.....	382.50	382.50 at 8%	30.60
Totals.....		\$20,803.88		\$1,693.61

[fol. 8201]

## County Maps Purchased First Year

Texas	No. Maps	Cost Each	Amount
Shackelford.....	6	\$6.00	\$36.00
Jones.....	3	6.00	18.00
Taylor.....	3	6.00	18.00
Callahan.....	6	6.00	36.00
Stephens.....	10	6.00	60.00
Palo Pinto.....	10	6.00	60.00
Parker.....	3	3.50	10.50
Hood.....	4	3.50	14.00
Erath.....	10	3.50	35.00
Eastland.....	10	6.00	60.00
Jack.....	4	6.00	24.00
Clay.....	10	6.00	60.00
Montague.....	3	6.00	18.00
Wise.....	3	6.00	18.00
Tarrant.....	3	5.00	15.00
Johnson.....	3	2.00	6.00
Ellis.....	3	2.00	6.00
Hill.....	3	2.00	6.00
McLennan.....	3	5.00	15.00
Dallas.....	3	2.00	6.00
Cooke.....	3	6.00	18.00
Grayson.....	4	2.00	8.00
Young.....	6	6.00	36.00
Throckmorton.....	3	3.50	10.50
Wichita.....	4	6.00	24.00
Comanche.....	10	3.50	35.00
Archer.....	3	6.00	18.00
Oklahoma			
Cotton.....	10	5.00	50.00
Stephens.....	10	5.00	50.00
Jefferson.....	10	5.00	50.00
Love.....	3	3.50	10.50
Carter.....	4	5.00	20.00
Murray.....	3	3.50	10.50
Garvin.....	3	3.50	10.50
McLain.....	3	3.50	10.50
Marshall.....	1	3.50	3.50
Bryan.....	3	3.50	10.50
Comanche.....	3	3.50	10.50
Grady.....	10	3.50	35.00

Total..... \$942.50

## Defendant's Exhibit No. 28—Continued

[fol. 8202]

## Engineering Department Supply Cost

## First Year

## General Engineering Cost

No. Units Used	Unit	Items	Unit Cost	Amount
235	Boxes	Gem Clips.....	\$ .02	\$4.70
22	Pounds	Rubber Bands.....	.40	8.80
141	Boxes	Autopoint pencil leads.....	.26	36.66
21	Boxes	Bank pins.....	.36	7.56
7	Quarts	Blue-black fountain pen ink.....	.90	6.30
1	Quart	Red fountain pen ink.....	1.20	1.20
6	Each	Memorandum and date pads.....	.50	3.00
43	Boxes	Bostich Staples.....	1.28	55.04
1,540	Each	Autopoint pencil erasers.....	.0097	13.40
425	Each	Fiberstock Pockets No. 1514-C.....	.136	57.80
40	Boxes	Carbon Paper—8.5 x 11 inches.....	1.80	72.00
2,050	Each	Letterheads—Printed.....	.0035	7.17
6,400	Each	Yellow copy sheets.....	.0004	2.56
12,000	Each	Thin copy sheets.....	.0009	10.80
1,300	Each	Interoffice letterheads.....	.0008	1.04
260	Each	Interoffice envelopes.....	.005	1.30
6,500	Each	Letterheads—plain.....	.0028	18.20
6,100	Each	Small envelopes—stamped.....	.0322	196.42
2,400	Each	Large envelopes—stamped.....	.0329	78.96
31	Each	Typewriter ribbons.....	.46	14.26
21	Each	Typewriter erasers.....	.06	1.26
6	Boxes	Type cleaner—Norta.....	.28	1.68
1,000	Each	Manila folders.....	.0135	13.50
20	Boxes	Mak-Ur-On tabs.....	1.613	32.26
28	Dozen	No. 2 pencils.....	.28	7.84
288	Pads.	Dietzgen No. 375 Cross Sec- tion paper.....	.39	112.32
180	Pads	Yellow cross section paper.....	.177	31.86
320	Sheets	Inventory book paper.....	.05	16.00
105	Sheets	Summary book paper.....	.0418	4.39
4	Pads	Wilson-Jones Columnar Pads No. 7025.....	1.00	4.00
250	Each	Pen Points.....	.008	2.00
26	Each	Pen staffs.....	.029	.75
105	Pads	Requisition on Purchasing Agent.....	.1103	11.58
625	Each	Karlton Klasp Envelopes 10 x 13 inches.....	.011	6.88
4,400	Each	Timesheets.....	.00135	5.94
26,250	Each	Time tickets.....	.0004	10.50
59	Rolls—50 Yds.	36 inch Economy Paper.....	3.00	177.00
315	Rolls—50 Yds.	50% 42 inch Blue print Paper.....	3.15	992.25
[fol. 8203]				
9	Rolls—50 Yds.	42 Inch white print cloth.....	\$40.00	\$360.00
69	Rolls—50 Yds.	100% White print paper.....	5.15	355.35
11	Rolls—50 Yds.	Negative Paper.....	9.00	99.00
2,000	Pads	Scratch Pads.....	.01	20.00
53	Rolls—50 Yds.	36" Detail paper.....	4.48	237.44
233	Yards	Cheese Cloth.....	.0253	5.89
130	Gross	Drawing Pencils.....	7.20	936.00
41	Dozen	Pencil Extenders.....	.60	12.60
50	Gross	Lettering Pens—No. 170, 303, and 404.....	1.51	72.50

## Defendant's Exhibit No. 28—Continued

No. Units Used	Unit	Items	Unit Cost	Amount
21	Dozen	Pen Sticks (Lettering).....	\$ .48	\$10.08
42	Each	Crow Quill pen holders.....	.075	3.15
16	Gross	Crow Quill pens No. 659.....	6.75	108.00
126	Dozen	Ruby Erasers.....	.33	41.58
124	Dozen	Art Gum Erasers.....	.38	47.12
6	Bottles	Hyperion Eradicator.....	.25	1.50
26	Rolls	Transparent mending tape.....	.0375	.97
8	Rolls	Gummed cloth mending tape..	.1996	1.60
32	Dozen	Pencil pointers.....	.90	28.80
13	Gallons	Carbon tetrachloride.....	2.00	26.00
2,100	Each	File backs—8.5 x 11 inches....	.0044	9.24
1	Set (12)	Show card colors.....	3.00	3.00
6	Each	Show card color brushes.....	.30	1.80
24	Bottles	Mucilage.....	.375	9.00
233	Boxes (100)	Thumb Tacks.....	.4096	95.44
6	Each	Water color saucers.....	.05	.30
12	Tubes	Water colors.....	.15	1.80
4	Each	Water color brushes.....	.30	1.20
12	Bottles	Drawing Ink—Black.....	7.50	90.00
3	Bottles	Drawing Ink—Blue.....	6.00	18.00
3	Bottles	Drawing Ink—Red.....	6.00	18.00
6	Bottles	Drawing Ink—Yellow.....	6.00	36.00
3	Bottles	Drawing Ink—Orange.....	6.00	18.00
2	Bottles	Drawing Ink—Green.....	6.00	12.00
38	Cans	Tracing powder.....	.225	8.55
4	Balls	Heavy white twine.....	.1123	.45
3	Sets	Mongol Indelible colored pen- cils.....	1.00	3.00
157	Dozen	Colored pencils.....	.52	81.64
1	Box-100	No. 6 Brad Fasteners.....	.44	.44
4	Boxes-100	No. 1 Brad Fasteners.....	.07	.28
4	Boxes-100	No. 2 Brad Fasteners.....	.08	.32
4	Boxes-100	Gummed Reinforcements.....	.04	.16
4	Jars	Opague.....	.50	2.00
3,200	Each	Blotters.....	.0025	.....
4	Jars	Cico Paste.....	.2736	1.09
10	Rolls	Photostat Paper.....	19.30	193.00
98	Dozen	Blueprint Arc Carbons.....	.84	82.32
100	Pounds	Potassium Bichromate.....	.45	45.00
[fol. 8204]				
12	Pounds	Negative Hypo.....	.40	4.80
270	Boxes	Photostat Hypo.....	.2125	57.37
140	Boxes	Photostat Developer—Large..	.6804	95.26
14	Each	Blueprint Lamp globes.....	1.00	14.00
4	Each	Mercury Vapor lamps.....	13.50	54.00
7,500	Sheets	Lefax paper—Transit.....	.0046	34.50
1,500	Sheets	Lefax Economy paper.....	.0012	1.80
7	Gross	Pencil Tip Erasers.....	1.07	7.49
63	Pads-100	Daily progress reports.....	.0781	4.92
27	Pads-100	Draft Receipts.....	.625	16.87
27	Pads-100	Draft Report blanks.....	.0839	3.02
27	Each	Draft Books (100 drafts).....	.4375	11.82
215	Each	Accident report blanks.....	.0064	1.38
165	Each	Automobile Reports.....	.0724	11.95
83	Each	Local supply order books.....	.1089	9.04
215	Each	Expense Account blanks.....	.005936	1.28
		Postage.....	.....	60.00
166	Each	Blue lumber crayon.....	.07	11.62
16	Rolls-24 Yds.	42 inch tracing cloth.....	26.55	424.80

Total.....\$5,962.71



General Engineering Cost  
First Year Surveying Equipment Cost

166—3104

No.	Item	Initial Cost Each	Initial Value and Depreciation	Depreciation—First Year	Investment First Year
8	Transits complete with tripods and cases	\$420.70	\$3,365.60 at 25%	\$841.40	\$3,365.60
5	Transits complete with tripods and cases	420.70	2,103.50 at 20%	420.70	2,103.50
8	Wye levels complete with tripods and cases	215.00	860.00 at 25%	215.00	860.00
4	Wye levels complete with tripods and cases	215.00	430.00 at 15%	64.50	430.00
12	Steel tapes, 200 feet long	9.45	132.30 at 100%	132.30	132.30
12	Steel tapes, 100 feet long	5.40	64.80 at 100%	64.80	64.80
26	Range poles, 8 feet long, jointed	3.24	84.25 at 100%	84.24	84.24
6	Leveling rods—13 feet long—adjustable	14.40	86.40 at 50%	43.20	86.40
20	Sets of chaining pins 12 inches long	1.80	36.00 at 100%	36.00	00
27	Machetes—22 inches in leather cases	3.24	87.48 at 50%	43.74	48
1	Binoculars—32 power in leather case	22.95	22.95 at 40%	9.18	22.95
4	Binoculars—32 power in leather cases	22.95	91.80 at 25%	22.95	91.80
2	Binoculars—32 power in leather cases	22.95	45.90 at 15%	6.89	45.90
14	Axes—Double Bit	1.94	27.16 at 100%	27.16	27.16
20	Axes—Pole	1.56	31.20 at 100%	31.20	31.20
26	Thermos Jug—2 gallon capacity	4.90	127.40 at 100%	127.40	127.40
57	Loose Leaf Covers—Lefax canvas back	.94	53.58 at 50%	26.79	53.58
9	Brief Cases—Engineers large	15.50	139.50 at 25%	34.88	139.50
9	Brief Cases—Engineers large	15.50	139.50 at 20%	27.90	139.50
18	First Aid Kits	3.27	58.86 at 100%	58.86	58.86
13	Protractors—6 inch Semi-circle	.45	5.85 at 50%	2.92	5.85
9	Engineers Scales—6 inches flat—in case	1.85	16.65 at 35%	5.83	16.65
9	Engineers Scales—6 inches flat—in case	1.85	16.65 at 30%	4.99	16.65
8	Surveyors Handbooks	2.50	20.00 at 25%	5.00	20.00
5	Surveyors Handbooks	2.50	12.50 at 20%	2.50	12.50
18	Loose Leaf Folders—Canvas back for 8.5x11 inch sheets	.88	15.84 at 50%	7.92	15.84
8	Surveyors Drawing Kits	1.25	10.00 at 25%	2.50	10.00
5	Surveyors Drawing Kits	1.25	6.25 at 20%	1.25	6.25
2	Brunton Pocket Compasses—in case	28.50	57.00 at 25%	14.25	57.00
3	Brunton Pocket Compasses—in case	28.50	85.50 at 20%	17.10	85.50
5	Thermos Jugs—1 gallon capacity	2.95	14.75 at 100%	14.75	14.75
Total			\$8,249.16	\$2,398.10	\$8,249.16

2801

17082



## Defendant's Exhibit No. 28—Continued

[fol. 8207]

## First Year Blueprinting—Preliminary

Quantities in Square Feet

	Blue Prints	White Prints	Cloth Prints	Nega- tives
Alignment Sheets.....	32,268	0	0	0
Main Line Cleaners, Measuring and Regu- lator Stations, etc.....	7,098	0	0	0
Linewalker's Houses, telephone booths....	235	0	0	0
Junctions, gate boxes.....	268	0	0	0
City Gate Stations.....	1,721	0	0	0
Railroad and Highway Crossings.....	625	0	0	0
River Crossings.....	1,879	0	0	0
Petrolia Compressor Station.....	12,390	0	0	0
Gas City Compressor Station.....	2,872	0	0	0
Fox Central Compressor Station.....	4,712	0	0	0
Joshua Compressor Station.....	6,098	0	0	0
Caddo Compressor Station.....	2,207	0	0	0
Breckenridge Compressor Station.....	2,779	0	0	0
Ibex Compressor Station.....	1,828	0	0	0
Ranger Number 3 Compressor Station....	1,923	0	0	0
Ranger Number 4 Compressor Station....	2,042	0	0	0
Pueblo Compressor Station.....	2,103	0	0	0
Sipe Springs Compressor Station.....	2,424	0	0	0
Camps, Warehouse, Pump Station.....	3,882	0	0	0
Standard Drawings.....	26,664	0	0	0
Lease Plats.....	6,103	0	0	0
County Maps.....	0	9,205	1,311	1,311
Sectional Maps.....	0	9,533	1,467	1,467
System Maps.....	0	3,976	0	986
Co-operative Maps.....	0	4,076	627	627
Totals.....	<u>122,117</u>	<u>26,790</u>	<u>3,405</u>	<u>4,301</u>

[fol. 8208]

## First Year Blueprinting—Final

Alignment Sheets.....	13,983	0	0	0
Main Line Cleaners, Measuring and Regu- lator Stations, etc.....	3,574	0	0	0
Linewalker's Houses, telephone booth....	84	0	0	0
Junctions, Gate Boxes.....	175	0	0	0
City Gate Stations.....	738	0	0	0
River Crossings.....	594	0	0	0
Well Line Inventory Sheets.....	3,008	0	0	0
Petrolia Compressor Station.....	4,614	0	0	0
Gas City Compressor Station.....	1,077	0	0	0
Fox Central Compressor Station.....	1,741	0	0	0
Joshua Compressor Station.....	2,284	0	0	0
Caddo Compressor Station.....	877	0	0	0
Breckenridge Compressor Station.....	1,017	0	0	0
Ibex Compressor Station.....	689	0	0	0
Ranger Number 3 Compressor Station....	723	0	0	0
Ranger Number 3 Compressor Station....	766	0	0	0
Pueblo Compressor Station.....	789	0	0	0
Sipe Springs Compressor Station.....	908	0	0	0
Camps, Warehouses, Pump Stations.....	2,086	0	0	0
County Maps.....	0	4,565	808	808
Sectional Maps.....	0	4,766	733	733
System Maps.....	0	2,541	0	795
CO-operative Maps.....	0	2,037	314	314
Field Maps.....	0	5,953	1,100	1,134
Total.....	<u>38,938</u>	<u>19,862</u>	<u>2,989</u>	<u>3,784</u>

## Defendant's Exhibit No. 28—Continued

[fol. 8209] First Year Photostating

## Full Sheets

	Preliminary	Final
Land and Legal Department.....	991	0
Accounting Department.....	898	165
Treasury Department.....	110	88
Engineering Department.....	330	0
Statistical Department.....	330	330
Operating Department.....	110	110
Safety Department.....	55	0
Geological Department.....	165	55
Executive Department.....	82	82
Industrial Department.....	82	0
Stargas Department.....	137	0
Total.....	3,290	830

[fol. 8210] Floor Space Requirement

Personnel	Number	Square Feet	
		Each	Total
Chief Engineer.....	1	323	323
Secretary of Chief Engineer...	1	209	209
Office Engineer.....	1	228	228
Statistical Engineer.....	1	200	200
Computers.....	8	90	720
Inventory men.....	3	90	270
Stenographers.....	4	60	240
Field Engineers.....	2	60	120
Designing Engineer.....	1	200	200
Designers.....	6	80	480
Chief Draftsman.....	1	200	200
Assistant Chief Draftsmen....	4	80	320
Draftsmen.....	52	60	3,120
File Room.....	1	329	329
Blueprint and Photostat Room..	1	418	418
Engineering Supply Room....	1	52	52
Blueprint Supply Room.....	1	28	28
Map Room.....	1	323	323
Total Square Feet.....			7,600

2804

[fol. 8211]

Second Year Engineering

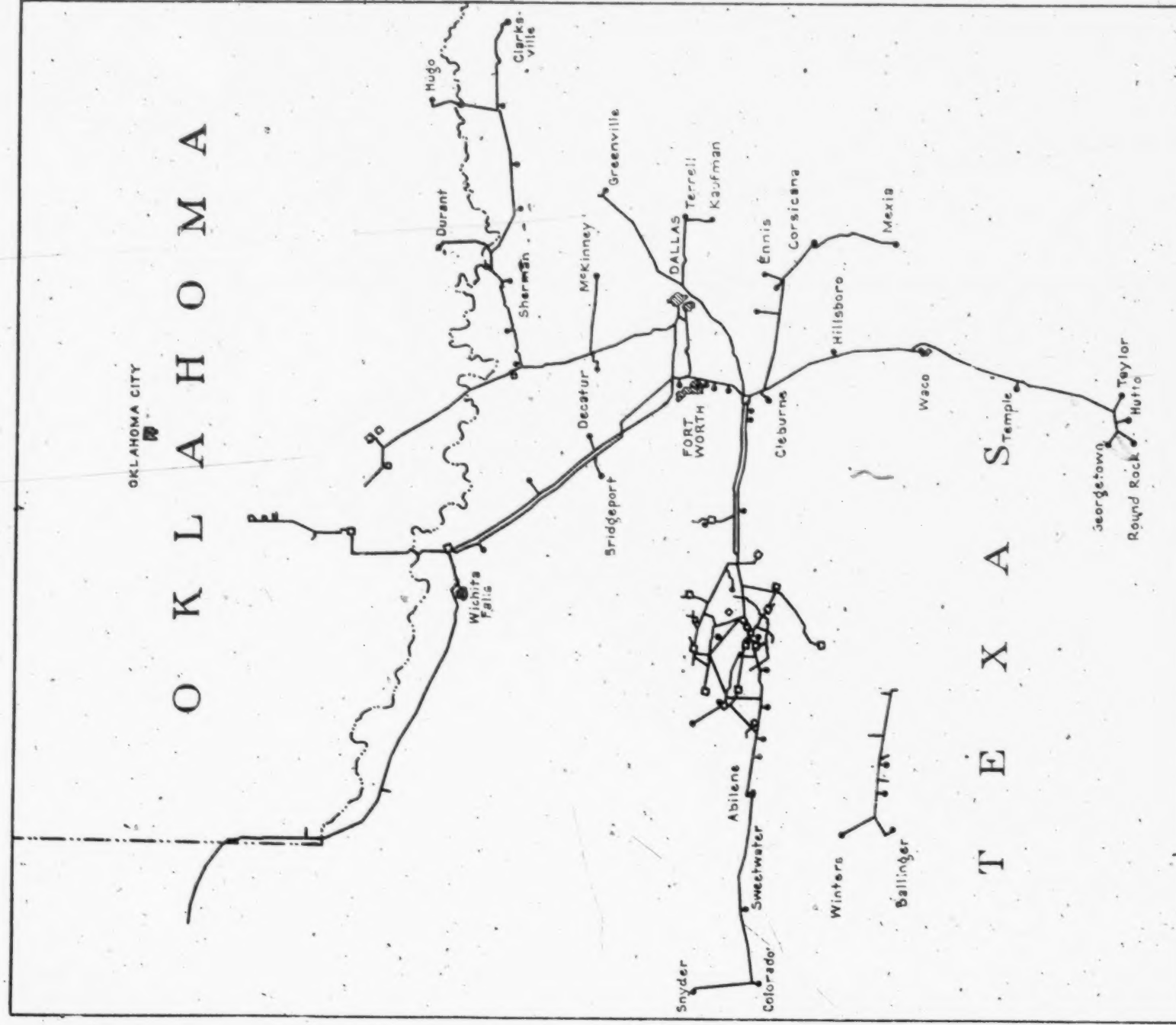
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LONE STAR GAS CO. 8212  
- CONSTRUCTION PERIOD -  
SECOND YEAR

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**PAGE**



## Defendant's Exhibit No. 28—Continued

[fol. 8213]

Traveling Expenses, Fees, and Pay Roll for Second Year of  
Engineering

## General Engineering Cost

Chief Engineer.....	\$12,000.00	
Secretary of Chief Engineer.....	2,100.00	
Office Engineer .51 year at \$4,800.00.....	2,448.00	
		\$16,548.00
Statistical Engineer .86 year at \$3,600.00.....	3,096.00	
Computers 4.68 at \$2,400.00.....	11,232.00	
Inventory Men 1.70 at \$2,040.00.....	3,468.00	
Stenographer (Head of Group).....	1,620.00	
Stenographers 1.93 at \$1,500.00.....	2,895.00	
		22,311.00
Field Engineer (Head of Group).....	3,600.00	
Field Engineers 2.59 at \$3,300.00.....	8,547.00	
		12,147.00
Designing Engineer.....	3,600.00	
Designers 3.54 at \$3,000.00.....	10,620.00	
		14,220.00
Chief Draftsman .44 year at \$3,600.00...	1,548.00	
Ass't Chief Draftsman (Head of Group)...	3,300.00	
Ass't Chief Draftsman 1.14 at \$3,000.00..	3,420.00	
Draftsmen 32.11 at \$2,040.00.....	65,504.40	
File Clerk (Head of Group).....	1,800.00	
File Clerks 1.14 at \$1,500.00.....	1,710.00	
Photostat Operator .80 at \$1,920.00.....	1,536.00	
Blueprint Operator .58 at \$1,920.00.....	1,113.60	
Blueprint-Photostat Helper .69 year at \$1,800.00.....	1,242.00	81,210.00
Car Cost 4.59 at \$2,100.00.....		9,639.00
Expenses 4.59 men at \$1,500.00.....		6,885.00
Helpers counting houses—216 days at \$4.00.....		864.00
Consulting Fees.....		10,000.00
Total.....		<u>\$173,824.00</u>

[fol. 8214]

## Traveling Expenses and Payroll for Second Year of Engineering

## Reproduction Cost of Final Engineering Records

Office Engineer .49 year at \$4,800.00.....	\$ 2,352.00
Statistical Engineer .14 at \$3,600.00.....	504.00
Inventory men .55 at \$2,030.00.....	1,122.00
Stenographers 1.00 at \$1,500.00.....	1,500.00
	3,126.00
Field Engineers 4.06 at \$3,300.00.....	13,398.00

## Defendant's Exhibit No. 28—Continued

Chief Draftsman .56 year at \$3,600.00 . . . .	\$2,016.00	
Ass't Chief Draftsman 2.82 at \$3,000.00 . . .	8,460.00	
Draftsman 42:34 at \$2,040.00 . . . . .	86,373.60	
File Clerks 2.82 at \$1,500.00 . . . . .	4,230.00	
Photostat Operator .20 year at \$1,920.00 . .	384.00	
Blueprint Operator .42 year at \$1,920.00 . .	806.40	
Blueprint-Photostat Helper .31 year at \$1,800.00 . . . . .	558.00	
		\$102,828.00
Car Cost 4.06 at \$2,100.00 . . . . .		8,526.00
Expenses 4.06 men at \$1,500.00 . . . . .		6,090.00
Total . . . . .		<u>\$136,320.00</u>

[fol. 8215]

## Engineering Personnel Required for the Second Year of Engineering

## General Engineering Costs

Chief Engineer . . . . .	Entire year
Secretary of Chief Engineer . . . . .	Entire year
Office Engineer	
Total work done under his supervision Second Year . .	112.42 Years
Work done, general engineering cost, under his supervision, Second Year . . . . .	57.20 Years
57.20 divided by 112.42 = .51 Office Engineer Years.	
Statistical Engineer	
Total work done under his supervision Second Year . .	10.86 Years
Work done, general engineering cost, under his supervision, Second Year . . . . .	9.31 Years
9.31 divided by 10.86 = .86 Statistical Engineer Cost	
Computers as shown in detail . . . . .	9,020 Hours
Plus 10% Omissions and Contingencies . . . . .	902
Total . . . . .	9,922 Hours
90% of 8.06 = 7.25	
7.25 x 2118 = 15,355 which is more than sufficient for Second Year	
9.922 divided by 2118 = 4.68 Computers Years	
Inventory Men, as shown in detail . . . . .	3,278 Hours
Preliminary Second Year	
Plus 10% Omissions and Contingencies . . . . .	328
Total . . . . .	3,606 Hours
3,606 divided by 2118 = 1.70 Inventory Men Years	
Stenographers as shown in detail . . . . .	5,643 Hours
Preliminary Second Year	
Plus 10% Omissions and Contingencies . . . . .	564
Total . . . . .	6,207 Hours
6,207 divided by 2118 = 2.93 Stenographer Years	

## Defendant's Exhibit No. 28—Continued

## Field Engineers

Survey Party Days—Preliminary Second Year.... 2,465 Days  
 2,465 divided by 3 = 822 Field Engineer Days  
 Obtaining Data for Calculating  
 pressure and volumes..... 54

Total..... 876 Days  
 876 divided by 244 = 3.59 Field Engineer Years

[fol. 8216]

Designing Engineer..... Entire year  
 Designers as shown in detail..... 6,811 Hours  
 Plus 10% Omissions and Contingencies..... 681

Total..... 7,492 Hours  
 90% of 5.40 = 4.86  
 4.86 x 2118 = 10,293 Hours  
 which is more than sufficient for Second Year  
 7,492 divided by 2118 = 3.54 Designer Years

## Chief Draftsman

Total work done under his supervision Second Year. 87.37 Years  
 Work done, general engineering cost, under his  
 supervision—second year..... 38.46  
 38.46 divided by 87.37 = .44 Chief Draftsman Years  
 Assistant Chief Draftsmen—1 for each 15 draftsmen  
 32.11 divided by 15 = 2.14 Assistant Chief Draftsmen Years  
 Draftsmen as shown in detail..... 61,836 Hours  
 Plus 10% Omissions and Contingencies..... 6,184

Total..... 68,020 Hours  
 68,020 divided by 2118 = 32.11 Draftsmen Years  
 File Clerks—1 for each 15 Draftsmen  
 32.11 divided by 15 = 2.14 File Clerk Years  
 Photostat Operator—3290 divided by 4120 = .80 Year  
 Blueprint Operator—92,062 divided by 157,635 = .58 Year  
 Blueprint-Photostat Helper..... .69 Year

[fol. 8217] Engineering Personnel Required for the Second Year of  
 Engineering

## Reproduction Cost of Final Engineering Records

## Office Engineer

Total Work done under his supervision, Second  
 Year..... 112.42 Years  
 Work done under his supervision, Reproduction  
 cost of Final Engineering Records, Second Year.. 55.22 Years  
 55.23 divided by 112.43 = .49 Office Engineer Years

## Defendant's Exhibit No. 28—Continued

## Statistical Engineer

Total work done under his supervision, Second Year..... 10.86 Years

Work done under his supervision, Reproduction cost of Final Engineering Records, Second Year.. 1.55 Years

1.55 divided by 10.86 = .14 Statistical Engineer Years

## Inventory Men, as shown in Detail

Final First Year..... 1,080 Hours

Plus 10% Omissions and Contingencies..... 108

Total..... 1,188 Hours

90% of 2.33 = 2.10

2.10 less 1.70 (No. employed in General Engineering Cost Work) = .40

.40 × 2118 = 847 Hours

Total..... 341 Hours

341 divided by 2206 = .15

.40 plus .15 = .55 Inventory men years

## Stenographers as shown in detail

Final First Year..... 1,958 Hours

Plus 10% Omissions and Contingencies..... 196

Total..... 2,154 Hours

90% of 3.83 = 3.45

3.45 less 2.93 (No. employed in General Engineering Cost Work) = .52

.52 × 2118 = 1,101

Total..... 1,053 Hours

1,053 divided by 2206 = .48

.52 plus .48 = 1.00 Stenographer Years

## Field Engineers

Survey party days in detail Final first Year..... 3,091 Days

3,091 divided by 3 = 1,030 Field Engineer Days

90% of 4.56 = 4.12

[fol. 8218] 4.12 less 3.59 (No. employed in General Engineering Cost Work) = .53

.53 × 244 = 129

Total..... 901

901 divided by 255 = 3.53

.53 plus 3.53 = 4.06 Field Engineer Years

## Chief Draftsman

Total work done under his supervision, Second Year 87.37 Years

Work done under his supervision, Reproduction cost of Final Engineering Records, Second Year.. 48.91 Years

48.91 divided by 87.37 = .56 Chief Draftsmen Years

## Assistant Chief Draftsmen—1 for each 15 Draftsmen

42.34 divided by 15 = 2.82 Assistant Chief Draftsmen Years

Defendant's Exhibit No. 28—Continued

Draftsmen as shown in detail

Final First Year.....	83,898 Hours
Plus 10% Omissions and Contingencies.....	8,390

Total.....	92,288 Hours
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90% of 49.76 = 44.78

44.78 less 32.11 (No. employed in General Engineering Cost Work) = 12.67

12.67 × 2118 =	26,835
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Total.....	65,453 Hours
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65,453 divided by 2206 = 29.67

12.67 plus 29.67 = 42.34 Draftsmen Years

File Clerks—1 for each 15 Draftsmen

42.34 divided by 15 = 2.82 File Clerk Years

Photostat Operator.....	20 Years
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Blueprint Operator.....	42 Years
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Blueprint-Photostat Helper.....	31 Years
---------------------------------	----------

(NOTE.) In the estimated man years for computers, inventory men and stenographers, 2118 hours of work per man has been used as effective for 90% of the men employed the previous year. This figure was obtained as follows:

Days per year.....	365.00
Sundays.....	52.00
Saturdays 52 half days or.....	26.00
Holidays.....	7.00
Sickness.....	4.25
Vacations.....	11.00
	<u>100.25</u>

Effective Days.....	264.75
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264.75 at 8 hours per day.....	2,118.00 Hours
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[fol. 8219]

(NOTE.) In the estimated man days for field engineers, 244 days of work per man has been used as an effective year for 90% of the men employed the previous year. This figure was obtained as follows:

Days per year.....	365.00
Sundays.....	52.00
Saturdays 52 half days or.....	26.00
Holidays.....	7.00
Sickness.....	4.00
Bad weather and traveling.....	21.00
Vacation.....	11.00
	<u>121.00</u>

Effective Days.....	244.00
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## Defendant's Exhibit No. 28—Continued

[fol. 8220]

## Second Year Details

[fol. 8221]

## Statistical Engineer—Second Year

	Com- puters Prelim.	Inven- tory Prelim.	Men Final	Stenographers	
				Prelim.	Final
T. P. U. System.....	112	95	8	79	20
F Line system including telephone line and other structures.....	189	123	9	110	44
E Line system including all struc- tures.....	263	210	15	158	50
G-1, J-3, J-7, J-6 taps and measur- ing stations.....	81	8	4	35	6
O Line system, including all struc- tures.....	203	195	15	130	45
J-2, J-2-8, C-2, J-2 lines including all structures.....	252	52	7	79	19
A Line system including telephone line, bridges, and other structures	475	545	37	394	126
2nd B Line system and B line tape, and other structures.....	207	170	19	135	41
L Line, 2nd 1 and M Line system including telephone line, bridges, etc.....	677	367	30	417	95
K Line system including all struc- tures.....	202	143	22	143	35
A-13, A-14, 2nd C Lines and all structures.....	86	25	7	39	8
R Line system, including all struc- tures.....	149	133	21	110	31
All Well Lines.....	684	272	257	357	171
Leases.....	406	87	0	210	0
Water Lines and structures.....	86	43	0	52	6
Railroad and highway crossings, checking and transmitting pre- liminary alignments.....	153	0	0	153	0
Shamrock, Waco, Richland and Abilene Warehouses.....	376	70	0	136	17
Massie, Forbes, Alvord, and Tiffin Lakes.....	198	88	0	79	11
Fox East Compressor Station.....	447	55	0	222	40
Loco Compressor Station.....	408	72	0	201	37
Brazos Compressor Station.....	406	55	0	214	45
X-ray Compressor Station.....	263	35	0	154	20
Brad Compressor Station.....	297	55	0	184	36
Ranger No. 1 Compressor Station.....	352	50	0	171	34
Ranger No. 2 Compressor Station.....	294	47	0	159	30
Eastland Compressor Station.....	269	50	0	159	33
Moran Compressor Station.....	175	29	0	92	15
Alvord Compressor Station.....	48	9	0	23	5
[fol. 8222]					
Cheaney Compressor Station.....	439	55	0	206	40
Desdemona Compressor Station...	260	36	0	152	20
Gainesville Compressor Station...	297	55	0	184	36
Tiffin Compressor Station.....	266	50	0	156	30
Filing (All Engineering Depart- ment except notes and drawings).....				550	550
Total.....	9,020	3,278	451	5,643	1,696



## Defendant's Exhibit No. 28—Continued

[fol. 8223] House Count and All Other Data for Calculating  
Loads

## Second Year

Town	Field Engr. Days	Number of Helpers	Helpers Man Days
Ballinger	2	3	6
Birdville	1	1	1
Bonham	2	2	4
Burleson	1	1	1
Clarksville	1	1	1
Colorado	1	1	1
Everman	1	0	0
Georgetown	1	2	2
Godley	1	0	0
Greenville	2	9	18
Henrietta	1	2	2
Honey Grove	1	2	2
Hutto	1	0	0
Joshua	1	0	0
Kaufman	1	1	1
Lipan	1	0	0
Mexia	2	2	4
Oaklawn (Fort Worth)	1	1	1
Round Rock	1	0	0
Snyder, Texas	1	2	2
Sweetwater	1	9	9
Strawn	1	1	1
Talpa	1	0	0
Taylor	1	9	9
Temple, Texas	2	9	18
Terrell	1	6	6
Valera	1	0	0
Winters	1	3	3
Durant	1	9	9
Hugo	1	3	3
Paris	1	14	14
Bowie	1	1	1
Decatur	1	2	2
Bridgeport	1	1	1

## Defendant's Exhibit No. 28—Continued

Town	Field Engr. Days	Number of Helpers	Helpers Man Days
Denton .....	2	9	18
Whitesboro .....	1	1	1
McKinney .....	1	12	12
Hillsboro .....	1	10	10
Waxahachie .....	1	11	11
Ennis .....	1	10	10
Corsicana .....	2	10	10
Wayland .....	1	0	0
Total .....	49		196
Plus 10% for investigating towns and communities that would not be served .....	5		20
Total .....	54		216

## [fol. 8224] Second Year Surveying Party Days

	Prelim.	Final
T. P. U. System, including telephone line and all structures .....	54	39
E Line system including all structures .....	108	100
F Line system including telephone line and all structures .....	86	87
G-1, J-3, J-7, J-6 taps and measuring stations .....	7	11
O Line system including all structures .....	104	90
J-2, C-2, J-4, J-2-8, including all structures .....	25	38
A Line system, including telephone lines, bridges, including all structures .....	413	251
2nd B Line system, B line taps, and measur- ing station, including all structures .....	95	82
L, 2nd L, and M Line system, including tele- phone line, bridges, including all structures .....	263	190
K Line system and measuring stations, in- cluding all structures .....	74	68
A-13, A-14, and 2nd C lines, including all structures .....	9	15
R Line system including all structures .....	71	62
All Well Lines .....	5	171

## Defendant's Exhibit No. 28—Continued

	Prelim.	Final
Leases .....	290	
Water Lines and structures .....	12	12
Shamrock, Waco, Richland, and Abilene Warehouses .....	4	34
Massie, Forbes, Alvord and Tiffin Lakes .....	26	22
Fox East Compressor Station .....	57	80
Loco Compressor Station .....	53	74
Brazos Compressor Station .....	60	90
X-ray Compressor Station .....	30	40
Brad Compressor Station .....	54	72
Ranger Number 1 Compressor Station .....	42	68
Ranger Number 2 Compressor Station .....	40	60
Eastland Compressor Station .....	42	66
Moran Compressor Station .....	25	30
Alvord Compressor Station .....	6	9
Cheaney Compressor Station .....	57	80
Desdemona Compressor Station .....	30	40
Gainesville Compressor Station .....	45	60
Tiffin Compressor Station .....	54	72
	<hr/>	<hr/>
	2,241	2,113
Plus 10% Omissions and Contingencies .....	224	211
	<hr/>	<hr/>
Total .....	2,465	2,324

[fol. 8225] Second Year Designing Time

	Hours
Measuring Stations .....	1,554
River Crossings .....	76
Warehouses and Camp Sites .....	610
Standard Drawings .....	160
Miscellaneous Drawings .....	130
Fox East Compressor Station .....	377
Loco Compressor Station .....	263
Brazos Compressor Station .....	328
X-ray Compressor Station .....	240
Brad Compressor Station .....	268
Ranger Number 1 Compressor Station .....	408
Ranger Number 2 Compressor Station .....	364
Eastland Compressor Station .....	320
Moran Compressor Station .....	156

## Defendant's Exhibit No. 28—Continued

	Hours
Alvord Compressor Station .....	68
Cheaney Compressor Station .....	377
Desdemona Compressor Station .....	324
Gainesville Compressor Station .....	374
Tiffin Compressor Station .....	414
<b>Total</b> .....	<b>6,811</b>

[fols. 8226-8263]

## Maps, Plans, and Drawings—2nd Year

## Labor—Draftsmen Only

Alignment Sheets No.	Drawing	Size in Inches	Preliminary Hours	Final Hours
10	Line F—Gainesville to Irving .....	15.5x26	540	490
11	Line F—Telephone Line .....	15.5x36	550	495
1	Line F-1—Denton Tap .....	15.5x36	54	48
5	Line F-2—F Line to McKinney .....	15.5x36	260	236
1	Line F-8—Acme Brick Tap .....	15.5x36	54	48
16	Line E—Denison to Clarksville .....	15.5x36	960	870
1	Line E-3—Whitesboro Tap .....	15.5x36	51	46
1	Line E-4—Girls Training School Tap .....	15.5x26	52	48
4	Line E-5—E Line to Durant, Oklahoma .....	15.5x36	215	192
1	Line E-7—Honey Grove Tap .....	15.5x36	51	46
5	Line E-16—E Line to Hugo, Oklahoma .....	15.5x36	320	288
6	Line O—Dallas to Greenville .....	15.5x36	375	336
10	Line O—Telephone—Joshua to Gordon .....	15.5x36	550	500
4	Line O-3—O Line to Terrell .....	15.5x36	230	204
9	Line O—Gordon to Joshua .....	15.5x36	530	480
1	Line OA-1—Strawn Tap .....	15.5x36	40	48
2	Line O-3-3—Kaufman Tap .....	15.5x36	90	82
10	Line J-2—J Line to Dallas .....	15.5x36	530	480
1	Line J-2-8 .....	15.5x36	35	40
1	Line J-3—Burleson Tap .....	15.5x36	47	42
1	Line J-6—Oaklawn Tap .....	15.5x36	47	42
1	Line J-7—Birdville Tap .....	15.5x36	45	40
2	Line C-2—J-2 Line to Irving .....	15.5x36	110	98
3	Line 2nd C—Irrving to Dallas .....	15.5x36	165	148
29	Line A—Shamrock to Wichita Falls .....	15.5x36	1640	1485
29	Line A—Telephone Line .....	15.5x36	1334	1247
1	Line A-A .....	15.5x36	55	48
1	Line A-B .....	15.5x36	55	48
1	Line A-B-A .....	15.5x36	50	46
1	Line A-C .....	15.5x36	55	50
1	Line A-C-B .....	15.5x36	52	46
1	Line A-D .....	15.5x36	54	48
1	Line A-E .....	15.5x36	54	48
1	Line A-F .....	15.5x36	56	50
1	Line A-F-A .....	15.5x36	54	48
1	Line A-F-A .....	15.5x36	52	46
1	Line A-F-B .....	15.5x36	54	48
1	Line A-F-C .....	15.5x36	...	35
1	Line A-G .....	15.5x36	53	48
1	Line A-H .....	15.5x36	53	48
1	Line A-J .....	15.5x36	53	48
2	Line A-K .....	15.5x36	106	96
1	Line A-K-A .....	15.5x36	50	46

## Defendant's Exhibit No. 28—Continued

[fol. 8264]

Alignment Sheets		Size in Inches	Preliminary Hours	Final Hours
No.	Drawing			
1	Gas Cleaner plans.....	20x30	26	22
1	Furnace and Air Heater.....	8.5x11	15	.....
1	Diagrammatic sketch showing EX Line to Durant, Oklahoma.....	8.5x11	7	.....
1	Durant 6 inch Line crossing Island Bayou.....	8.5x11	.....	7
1	Oil Separator.....	8.5x11	12	9
1	Plan and Elevation of Piping for Meas- uring Station.....	20x30	.....	33
1	Meter House—Tiffin Line 8 inch Building and Installation.....	20x30	16	14
1	Gas Separator—Line W.T. 305.....	20x30	26	24
3	Texas Electric Service Company Meas- ing Station—Building and Installa- tion.....	20x30	92	.....
1	Lewis Poultry Colony Measuring Sta- tion—General Layout.....	20x30	8	5
1	Trinity Portland Cement Company Measuring Station—Building and In- stallation.....	20x30	12	10
1	Intermediate Accumulator—Plan and Section.....	8.5x11	14	8
1	10-foot-10-inch Storage Tank.....	8.5x11	14	8
1	High Pressure Accumulator.....	8.5x11	12	8
1	6 inch Line crossing T. & P. ½ miles East of Denton.....	8.5x21	20	15
1	Cooper Compressor Cylinder—Standards —Serial Number Plate.....	8.5x21	.....	.....
Mounting System Maps.....		.....	112	4
Total.....		.....	<u>61,836</u>	<u>47,973</u>

[fol. 8265]

## General Expense

[fol. 8266]

## Summary

## General Engineering Costs

Item	Amount
Office Equipment*	\$925.00
County Maps .....	602.00
Office and Field Supplies .....	4,553.87
Surveying Equipment Cost*	1,785.40
Telephones .....	520.34
Toll Charges .....	2,543.40
Telegrams .....	423.90
Total .....	<u>\$11,354.51</u>

\* Depreciation Only.

## Defendant's Exhibit No. 28—Continued

[fol. 8267]

## General Expense

## Summary

## Reproduction Cost of Final Engineering Records

Item	Amount
Office Equipment* .....	\$854.40
Office and Field Supplies .....	4,375.29
Surveying Equipment Cost* .....	2,182.15
Telephones .....	192.46
Toll Charges .....	3,108.60
Telegrams .....	518.10
<b>Total</b> .....	<b>\$11,231.00</b>

\* Depreciation Only.

[fol. 8268]

## Second Year Details

[fol. 8269] Engineering Department Office Equipment Cost—Second Year

No. In Use	Item	Total Value Each	Total Value and Depreciation	Amount Charged to Second Year
1	Golden oak desk—glass top 60x36 inches .....	\$79.10	\$79.10 at 8%	\$6.33
1	Golden oak desk—glass top 72x35 inches .....	58.50	58.50 at 8%	4.68
4	Golden oak, swivel arm chairs, leather seat .....	22.00	88.00 at 8%	7.04
12	Golden oak arm chairs, straight .....	11.85	142.20 at 8%	11.38
5	Golden oak—4 Section Book cases with top and base .....	43.90	219.50 at 8%	17.56
1	Golden oak telephone table .....	10.80	10.80 at 8%	.86
14	Golden oak costumers .....	7.40	103.60 at 8%	8.29
10	Golden oak globe letter trays—single .....	1.60	16.00 at 8%	1.28
1	Rug—14x16 foot .....	212.50	212.50 at 8%	17.00
2	Smoking Stands .....	6.34	12.68 at 8%	1.01
2	Sheaffer double fountain pen desk sets .....	20.00	40.00 at 8%	3.20
8	Golden oak system map frames .....	12.50	100.00 at 8%	8.00
2	Thermos bottles with tray and glasses .....	11.40	22.80 at 8%	1.82
69	Steel mesh waste baskets .....	.90	62.10 at 15%	9.31
2	Brass cuspidors .....	2.07	4.14 at 8%	.33
68	Enameled steel cuspidors .....	.85	57.80 at 8%	4.62
70	Rubber cuspidor mats .....	.42	29.40 at 25%	7.35
11	Staffords self-inking stamp pads .....	.29	3.19 at 25%	.80
..	Rubber Stamps .....	..	48.50 at 20%	9.70
2	Bostich staple machine—Executive type .....	7.50	15.00 at 8%	1.20
51	Auto Bakelite Pencils .....	.40	20.40 at 8%	1.63
12	Engineers Scales—12 inches .....	3.24	38.88 at 8%	3.11
11	Architects Scales—12 inches .....	3.24	35.64 at 8%	2.85
7	Polyphase Duplex Slide Rules—10 inches in case .....	8.42	58.94 at 8%	4.72



## Defendant's Exhibit No. 28—Continued

No. In Use	Item	Total Value Each	Total Value and Depreciation	Amount Charged to Second Year
6	Golden oak typewriter desk 60x34 inches.....	\$54.60	\$327.60 at 8%	\$26.21
6	Adjustable steel chairs—Leather back and seat.....	17.43	104.58 at 8%	6.97
1	Golden oak Settee—48 inches..	42.00	42.00 at 8%	3.36
19	Berloy Steel Filing cabinets...	27.30	518.70 at 8%	41.50
6	Royal Standard typewriters...	83.03	498.18 at 8%	39.85
6	Remington Line-A-Times.....	21.00	126.00 at 8%	10.08
2	Globe Letter trays—double...	4.40	8.00 at 8%	.64
4	Sheaffers single fountain pen desk sets.....	12.00	48.00 at 8%	3.84
1.	Rug—10x14 feet.....	132.00	132.00 at 8%	10.56
[fol. 8270]				
2	Secretary's Handbooks.....	3.50	7.00 at 8%	.56
2	Dictionaries.....	5.00	10.00 at 8%	.80
31	Bostich Staple Machines stand-ard.....	3.02	93.62 at 8%	7.49
6	Card Index cases.....	.60	3.60 at 8%	.29
1	Desk blotter holder.....	5.50	5.50 at 8%	.44
76	Sets Alphabetical indexes—for files.....	.95	72.20 at 25%	18.05
6	Dexter pencil sharpeners No. 2.	3.95	23.58 at 8%	1.89
1.	Golden oak desk with glass top, 66 x 36 inches.....	84.00	84.00 at 8%	6.72
1	Golden oak desk with glass top, 72 x 34 inches.....	58.00	58.00 at 8%	4.64
1	Rug—12 x 14 feet.....	158.70	158.70 at 8%	12.70
19	Golden oak desks—60x34 inches.....	54.60	1,037.40 at 8%	82.99
20	Golden oak swivel chairs—leather seats.....	18.50	370.00 at 8%	29.60
2	Golden oak tables—60 x 34 inches.....	30.80	61.60 at 8%	4.93
5	Golden oak chairs.....	7.50	37.50 at 8%	3.00
1	Planimeter.....	45.00	45.00 at 8%	3.60
3	Marchant Electric Calculators.	425.00	1,275.00 at 8%	102.00
2	Walraven extension binders No. L-5840.....	7.20	14.40 at 8%	1.15
1	Walraven extension binder No. L-5888.....	8.44	8.44 at 8%	.67
4	Vance K. Miller Binders No. 541-A.....	1.25	5.00 at 8%	.40
1	Underwood Typewriter — 26 inch carriage.....	137.70	137.70 at 8%	11.02
2	Golden oak tables 72x34 inches.	35.00	70.00 at 8%	5.60
4	Sheridan adjustable drawing tables No. 2263.5-B.....	65.00	260.00 at 8%	20.80
4	Golden oak desk chairs—leather seats.....	18.50	74.00 at 8%	5.92
8	Tee Squares—adjustable heads 42 inches.....	5.94	47.52 at 8%	3.80
8	45 degree Triangles, 18 in....	4.41	35.28 at 8%	2.82
8	30-60 Triangles—18 inches....	3.06	24.48 at 8%	1.96
	Steel Shelving.....		182.25 at 8%	14.58
78	Drafting tables—60 x 34 inches with drawers.....	26.25	2,047.50 at 8%	163.80
78	Adjustable wooden drafting stools.....	12.92	1,007.76 at 8%	80.62
74	Tee Squares—42 inches.....	2.86	211.64 at 8%	16.93
1	Globe Wernicke filing cabinet No. 7310-C.....	1.20	1.20 at 8%	.10
2	Beam compasses in case.....	12.25	24.50 at 8%	1.96

## Defendant's Exhibit No. 28—Continued

[fol. 8271]		Total	Total Value	Amount
No. In	Item	Value	and	Charged to
Use		Each	Depreciation	Second Year
3	Sets proportional dividers.....	\$12.50	\$37.50 at 8%	\$3.00
1	Set Wrice lettering guides.....	35.00	35.00 at 8%	2.80
4	Steel straight edges—48 inches.....	7.56	30.24 at 8%	2.42
4	Vernier Protractors.....	9.00	36.00 at 8%	2.88
1	Golden oak table—88 x 30 inches.....	48.50	48.50 at 8%	3.88
2	Hamilton file drawer bases 32 x 42 inches.....	6.00	12.00 at 8%	.96
13	Hamilton 5 drawer files—32 x 42 inches.....	28.50	370.50 at 8%	29.64
3	Hamilton file drawer tops—32 x 42 inches.....	6.00	18.00 at 8%	1.44
1	Hamilton file drawer—32 x 42 inches with base.....	18.70	18.70 at 8%	1.50
1	Hamilton 1 file drawer—32 x 42 inches.....	12.00	12.00 at 8%	.96
1	Vertical steel map file.....	300.00	300.00 at 8%	24.00
1	Steel supply cabinet.....	32.00	32.00 at 8%	2.56
2	Pigeon hole horizontal map files.....	65.00	130.00 at 8%	10.40
1	Steel mesh waste basket—30 inches high.....	3.15	3.15 at 15%	.47
7	File cases—for scout tickets Double.....	10.00	70.00 at 8%	5.60
4	Scissors—14 inches.....	3.75	15.00 at 20%	3.00
2	Step ladders—3 feet high.....	2.00	4.00 at 8%	.32
10	Oil cans—with spouts—for cleaning fluid.....	.25	2.50 at 20%	.50
1	Pease blueprint machine—54 inches.....	1,716.00	1,716.00 at 8%	137.28
1	Photostat Machine—18 x 22 inches.....	1,188.00	1,188.00 at 8%	85.04
1	Paragon Blueprint Dryer—54 inches.....	759.00	759.00 at 8%	60.72
1	Pako Photo Dryer.....	176.00	176.00 at 8%	14.08
2	Cooper-Hewitt Mercury Tube Lights.....	80.00	160.00 at 8%	12.80
1	Photostat Washer.....	82.50	82.50 at 8%	6.50
1	Blueprint washer.....	68.00	68.00 at 8%	5.44
1	Drying rack for negatives.....	41.80	41.80 at 8%	3.34
1	Blueprint table—45 x 66 inches.....	38.50	38.50 at 8%	3.08
1	Table—32 x 60 inches for dryer.....	3.85	3.85 at 8%	.31
1	Straight oak chair.....	5.00	5.00 at 8%	.40
1	Galvanized iron waste paper can.....	2.50	2.50 at 20%	.50
1	Blueprint paper can—8 x 55 inches.....	5.00	5.00 at 8%	.40
1	Photo trimmer—Eastman—18 x 18 inches.....	35.00	35.00 at 8%	2.80
[fol. 8272]				
2	Loose leaf folders 8.5 x 11 inches.....	.88	1.76 at 25%	.44
1	Piece plate glass 24 x 30 inches—Gr. edge.....	4.50	4.50 at 25%	1.13
4	Golden oak map cases.....	1,309.00	5,236.00 at 8%	418.88
1	No. 60 Marvel punch.....	1.65	1.65 at 8%	.13
1	Improved hummer punch with 4 heads.....	9.90	9.90 at 8%	.79
	Technical Reference Books.....	382.50	382.50 at 8%	30.60
Totals.....		\$21,871.65		\$1,780.00
52% for General Engineering Cost.....				\$925.60
48% for Reproduction Cost of Final Engineering Records.....				854.40

## Defendant's Exhibit No. 28—Continued

[fol. 8273]

## County Maps Purchased—Second Year

Texas	No. Maps	Cost Each	Amount
Brown.....	4	\$6.00	\$24.00
Falls.....	4	2.00	8.00
Bell.....	3	2.00	6.00
Williamson.....	3	2.00	6.00
Limestone.....	4	6.00	24.00
Navarro.....	4	5.00	20.00
Kaufman.....	3	2.00	6.00
Rockwall.....	3	2.00	6.00
Collin.....	3	2.00	6.00
Denton.....	3	6.00	18.00
Hunt.....	3	2.00	6.00
Fannin.....	6	2.00	12.00
Lamar.....	3	2.00	6.00
Red River.....	3	2.00	6.00
Wilbarger.....	4	3.50	14.00
Hardeman.....	3	3.50	10.50
Collingsworth.....	6	6.00	36.00
Wheeler.....	10	6.00	60.00
Nolan.....	3	6.00	18.00
Scurry.....	3	6.00	18.00
Fisher.....	3	6.00	18.00
Mitchell.....	3	6.00	18.00
Donley.....	1	6.00	6.00
Gray.....	5	6.00	30.00
Freestone.....	4	2.00	8.00
Childress.....	1	6.00	6.00
Runnels.....	6	6.00	36.00
Coleman.....	6	6.00	36.00
Carson.....	5	6.00	30.00
Moore.....	5	6.00	30.00
Oklahoma			
Washita.....	5	3.50	17.50
Beckham.....	5	3.50	17.50
Harmon.....	3	3.50	10.50
Jackson.....	1	3.50	3.50
Choctaw.....	3	3.50	10.50
Greer.....	1	3.50	3.50
Tillman.....	3	3.50	10.50
Total.....			<u>\$602.00</u>

[fol. 8274]

## Engineering Department Supply Cost

## Second Year

No. Units Used	Unit	Items	Unit Cost	Amount
257	Boxes	Gem Clips.....	\$.02	\$5.14
23	Pounds	Rubber bands.....	.40	9.20
117	Boxes	Autopoint pencil leads.....	.26	30.42
19	Boxes	Bank Pins.....	.36	6.84
7	Quarts	Blue-Black Fountain Pen Ink.....	.90	6.30
1	Quart	Red Fountain Pen Ink.....	1.20	1.20
6	Each	Memorandum and date pads.....	.50	3.00
42	Boxes	Bostich Staples.....	1.28	53.76
1,400	Each	Autopoint pencil erasers.....	.0087	12.19
375	Each	Fiberstock Pockets No. 1514-C.....	.136	51.00
38	Boxes	Carbon Paper—8.5x11 Inches.....	1.80	68.40

## Defendant's Exhibit No. 28—Continued

No. Units Used	Unit	Items	Unit Cost	Amount
2,200	Each	Letterheads—Printed.....	.0035	7.69
8,000	Each	Yellow copy sheets.....	.0004	3.20
13,575	Each	Thin Copy sheets.....	.0009	12.22
1,400	Each	Interoffice letterheads.....	.0008	1.12
275	Each	Interoffice envelopes.....	.005	1.37
8,000	Each	Letterheads—plain.....	.0028	22.40
9,500	Each	Small envelopes—stamped.....	.0322	305.90
3,700	Each	Large envelopes—stamped.....	.0329	121.73
33	Each	Typewriter ribbons.....	.46	15.18
22	Each	Typewriter erasers.....	.06	1.32
6	Boxes	Type cleaner—Norta.....	.28	1.68
1,200	Each	Manila Folders.....	.0135	16.20
20	Boxes	Mak-Ur-On-Table Tabs.....	1.613	32.26
23	Dozen	No. 2 Pencils.....	.28	6.44
150	Pads	Yellow cross section paper....	.177	26.55
700*	Pads	Dietzgen No. 375 Cross Section paper.....	.39	273.00
550	Sheets	Inventory book paper.....	.05	27.50
110	Sheets	Summary book paper.....	.0418	4.60
4	Pads	Wilson Jones Columnar Pads No. 7025.....	1.00	4.00
220	Each	Pen Points.....	.008	1.76
40	Each	Pen staffs.....	.029	1.16
75	Pads	Requisition on Purchasing Agent.....	.1103	8.27
1,025	Each	Karlton Klasp Envelopes— 10 x 13 inches.....	.011	11.28
5,700	Each	Time sheets.....	.00135	7.69
4,000	Each	Time tickets.....	.0004	16.00
75	Rolls—50 Yds.	36 inch Economy Paper.....	3.00	225.00
61	Rolls—24 Yds.	30 inch Tracing Cloth.....	19.35	1,180.35
30	Rolls—24 Yds.	36 inch Tracing Cloth.....	22.30	669.00
[fol. 8275]				
9	Rolls—24 Yds.	54 inch Tracing Cloth.....	\$42.10	\$378.90
4	Gallons	Frisket Cement.....	2.60	10.40
5	Gallons	Wall paper paste.....	1.25	6.25
281	Rolls—50 Yds.	50% 42 Inch Blueprint paper.....	3.15	885.15
12	Rolls—50 Yds.	42 inch White print cloth.....	40.00	480.00
87	Rolls—50 Yds.	100% 42 inch Whiteprint Paper.....	5.15	448.05
16	Rolls—50 Yds.	Negative Paper.....	9.00	144.00
2,648	Pads	Scratch Pads.....	.01	26.48
70	Rolls—50 Yds.	36 inch Detail Paper.....	4.48	31.36
321	Yards	Cheese Cloth.....	.0253	8.12
182	Gross	Drawing pencils.....	7.201	310.40
18	Dozen	Pencil extenders.....	.90	16.20
78	Gross	Lettering pens No. 170, 303, and 404.....	1.51	117.78
27	Dozen	Pen Staffs (Lettering).....	.48	12.96
59	Each	Crow Quill pen holders.....	.075	4.42
22	Gross	Crow quill pens No. 659.....	6.75	148.50
159	Dozen	Ruby Erasers.....	.33	52.47
157	Dozen	Art Gum erasers.....	.38	59.66
5	Bottles	Hyperion eradicator.....	.25	1.25
26	Rolls	Transparent mending tape.....	.0375	.97
9	Rolls	Gummed cloth mending tape..	.1996	1.80
41	Dozen	Pencil pointers.....	.90	36.90
19	Gallons	Carbon tetrachloride.....	2.00	38.00
3,300	Each	File baks—8.5 x 11 inches.....	.0044	14.52
1	Set (12)	Show card colors.....	3.00	3.00

## Defendant's Exhibit No. 28—Continued

No. Units Used	Unit	Items	Unit Cost	Amount
6	Each	Show card color brushes.....	.30	1.80
26	Bottles	Mucilage.....	.375	9.75
304	Boxes (100)	Thumb tacks.....	.4096	124.46
12	Tubes	Water colors.....	.15	1.80
4	Each	Water color brushes.....	.30	1.20
15	Bottles	Drawing ink—Black.....	7.50	112.50
3	Bottles	Drawing ink—Blue.....	6.00	18.00
3	Bottles	Drawing ink—Red.....	6.00	18.00
9	Bottles	Drawing ink—Yellow.....	6.00	54.00
4	Bottles	Drawing ink—Orange.....	6.00	24.00
3	Bottles	Drawing ink—Green.....	6.00	18.00
53	Cans	Tracing powder.....	.225	11.92
4	Rolls	Heavy White Twine.....	.1123	.45
2	Sets	Mongol Indelible colored Pen- cils.....	1.00	2.00
154	Dozen	Colored pencils.....	.52	80.08
1	Box-100	No. 6 Brad Fasteners.....	.44	.44
5	Boxes-100	No. 1 Brad Fasteners.....	.07	.35
5	Boxes-100	No. 2 Brad Fasteners.....	.08	.40
5	Boxes-100	Gummed reinforcements.....	.04	.20
5	Jars	Opague.....	.50	2.50
4,500	Each	Blotters.....	.0025	11.25
5	Jars	Cico Paste.....	.2736	1.37
[fol. 8276]				
12	Rolls	Photostat paper.....	\$19.30	\$231.60
90	Dozen	Blueprint arc carbons.....	.84	7.56
100	Pounds	Potassium Bichromate.....	.45	45.00
12	Pounds	Negative Hypo.....	.40	4.80
280	Boxes	Photostat Hypo.....	.2125	59.50
140	Boxes	Photostat developer—large....	.6804	95.26
14	Boxes	Blueprint lamp globes.....	1.00	14.00
1	Each	Paragon Dryer belt—54 inches.	60.00	60.00
1	Each	Pako Dryer belt.....	19.29	19.29
4	Each	Mercury vapor lamps.....	13.50	54.00
14,700	Sheets	Lefax paper—Transit.....	.0046	67.62
2,900	Sheets	Lefax economy paper.....	.0012	3.48
12	Gross	Pencil tip erasers.....	1.07	12.84
107	Pads-100	Daily progress Reports.....	.0781	8.36
46	Pads-100	Draft Receipts.....	.625	28.75
46	Pads-100	Draft Report Blanks.....	.0839	3.86
46	Each	Draft Books (100 drafts).....	.4375	20.12
330	Each	Accident Report Blanks.....	.0064	2.11
277	Each	Automobile Reports.....	.0724	20.05
139	Each	Local Supply Order Books.....	.1089	15.14
330	Each	Expense Account Blanks.....	.005936	1.96
		Postage.....		150.00
279	Each	Blue lumber crayon.....	.07	19.53
Total.....				<u>\$8,929.16</u>

51% for General Engineering Cost..... \$4,553.87

49% for Reproduction Cost of Final Engineering Records..... 4,375.29



## Defendant's Exhibit No. 28—Continued

[fol. 8277]

## Second Year Surveying Equipment Cost

No.	Item	Initial Cost Each	Initial Value and Depreciation	Depreciation 2nd Year	Additional Investment Second Year
4	Transits complete with tripods and cases	\$420.70	\$1,682.80 at 25%	841.00	\$1,682.80
6	Transits complete with tripods and cases	420.70	2,524.20 at 15%	378.63	2,524.20
5	Transits complete with tripods and cases	420.70	2,103.50 at 20%	420.70	
8	Transits complete with tripods and cases	420.70	3,365.60 at 25%	841.40	
4	Wye levels complete with tripods and cases	215.00	860.00 at 25%	215.00	
2	Wye levels complete with tripods and cases	215.00	430.00 at 15%	64.50	
34	Steel tapes 200 ft.	9.45	321.30 at 100%	321.30	321.30
12	Steel tapes 100 ft.	5.40	64.80 at 100%	64.80	64.80
46	Range poles 8 feet long—jointed	3.24	149.04 at 100%	149.04	149.04
6	Levelling rods 13 ft. long—adjustable	14.40	86.40 at 50%	43.20	
40	Sets chaining pins, 12 inches	1.80	72.00 at 100%	72.00	72.00
27	Machetes—22 inches in leather case	3.24	87.48 at 50%	43.74	
18	Machetes—22 inches in leather case	3.24	58.32 at 50%	29.16	58.32
15	Machetes—22 inches in leather case	3.24	48.60 at 60%	29.16	48.60
4	Binoculars—32 power in leather case	22.95	91.80 at 25%	22.95	
2	Binoculars—32 power in leather case	22.95	45.90 at 15%	6.89	
14	Axes—Double bit	1.94	27.16 at 100%	27.16	27.16
24	Axes—Pole	1.56	37.44 at 100%	37.44	37.44
44	Thermos jugs—2 gallon capacity	4.90	215.60 at 100%	215.60	215.60
57	Loose leaf covers—Canvas back	.94	53.58 at 50%	26.79	
44	Loose leaf covers—Canvas back	.94	41.36 at 50%	20.68	41.36
9	Brief Cases—Engineers' Large	15.50	139.50 at 25%	34.88	
9	Brief Cases—Engineers' Large	15.50	139.50 at 20%	27.90	
4	Brief Cases—Engineers' Large	15.50	62.00 at 25%	15.50	62.00
9	Brief Cases—Engineers' Large	15.50	139.50 at 15%	20.93	139.50
32	First aid kits	3.27	104.64 at 100%	104.64	104.64
13	Protractors—6 inch semi-circle	.45	5.85 at 50%	2.92	



[fol. 8278]

No.	Item	Initial Cost Each	Initial Value and Depreciation	Depreciation 2nd Year	Additional Investment Second Year
10	Protractors—6 inch semi-circle	\$ 45	4.50 at 50%	\$2.25	\$4.50
9	Engineer's Scales	1.85	16.65 at 35%	5.83	
9	Engineer's Scales	1.85	16.65 at 30%	4.99	
5	Engineer's Scales	1.85	9.25 at 35%	3.24	9.25
9	Engineer's Scales	1.85	16.65 at 25%	4.16	16.65
18	Loose leaf folders for 8.5x11 in. sheets Canvas Back	.88	15.84 at 50%	7.92	
14	Loose leaf folders for 8.5x11 in. sheets Canvas Backs	.88	12.32 at 50%	6.16	12.32
3	Surveyor's Handbooks	2.50	17.50 at 25%	4.38	
5	Surveyor's Handbooks	2.50	12.50 at 20%	2.50	
4	Surveyor's Handbooks	2.50	10.00 at 25%	2.50	10.00
6	Surveyor's Handbooks	2.50	15.00 at 15%	2.25	15.00
8	Surveyor's Drawing Kits	1.25	10.00 at 25%	2.50	
5	Surveyor's Kits	1.25	6.25 at 20%	1.25	
4	Surveyor's Kits	1.25	5.00 at 20%	1.00	5.00
6	Surveyor's Kits	1.25	7.50 at 15%	1.13	7.50
3	Brunton Pocket compasses in case	28.50	85.50 at 15%	12.83	85.50
3	Brunton Pocket compasses in case	28.50	85.50 at 20%	17.10	
2	Brunton Pocket compasses in case	28.50	57.00 at 25%	14.25	
1	Brunton Pocket compasses in case	28.50	28.50 at 25%	7.12	28.50
8	Thermos Jugs—1 Gallon capacity	2.95	23.60 at 100%	23.60	23.60
81	Rules—6 feet long, Zig Zag	.45	36.45 at 100%	36.45	33.75
22	Steel tapes—50 feet long on reel—in leather case	5.40	118.80 at 100%	118.80	118.80
5	Prodding rods	2.50	12.50 at 50%	6.25	12.50
6	Prodding rods	2.50	15.00 at 55%	5.25	15.00
12	Prodding rods	2.50	30.00 at 25%	7.50	30.00
5	Drain spades	1.15	5.75 at 50%	2.87	5.75
6	Drain spades	1.15	6.90 at 35%	2.41	6.90
11	Drain spades	1.15	13.80 at 25%	3.45	13.80
Total			\$13,652.78	\$3,967.55	\$6,005.78
45% for General Engineering Cost					\$1,785.40
55% for Reproduction Cost of Final Engineering Records					2,182.15

## Defendant's Exhibit No. 28—Continued

[fol. 8279]

## Second Year Blueprinting—Preliminary

## Quantities in Square Feet

	Blue Prints	White Prints	Cloth Prints	Nega- tives
Alignment sheets.....	23,270	0	0	0
Main line measuring and regulating stations.....	1,700	0	0	0
Linewalker's lot.....	175	0	0	0
Junctions.....	300	0	0	0
City Gate Stations.....	5,346	0	0	0
Railroad and Highway Crossings.....	689	0	0	0
River crossings.....	1,876	0	0	0
Fox East Compressor Station.....	1,800	0	0	0
Loco Compressor Station.....	2,000	0	0	0
Brazos Compressor Station.....	2,015	0	0	0
X-ray Compressor Station.....	1,571	0	0	0
Brad Compressor Station.....	1,347	0	0	0
Ranger Number 1 Compressor Station.....	1,601	0	0	0
Ranger Number 2 Compressor Station.....	1,271	0	0	0
Eastland Compressor Station.....	1,918	0	0	0
Moran Compressor Station.....	700	0	0	0
Alvord Compressor Station.....	834	0	0	0
Cheaney Compressor Station.....	2,518	0	0	0
Desdemona Compressor Station.....	1,600	0	0	0
Gainesville Compressor Station.....	1,145	0	0	0
Tiffin Compressor Station.....	1,733	0	0	0
Warehouses.....	1,400	0	0	0
Standard drawings.....	12,875	0	0	0
Lease plats.....	5,065	0	0	0
County Maps.....	0	9,673	1,546	1,546
System Maps.....	0	4,093	0	955
Totals.....	<u>74,249</u>	<u>13,766</u>	<u>1,546</u>	<u>2,501</u>

[fol. 8280]

## Second Year Blueprinting—Final

Alignment sheets.....	10,486	0	0	0
Main line measuring and regulating stations, etc.....	900	0	0	0
Linewalker's lot, cottages.....	175	0	0	0
Junctions.....	150	0	0	0
City Gate stations.....	2,300	0	0	0
River Crossings.....	588	0	0	0
Well Line inventory sheets.....	1,000	0	0	0
Fox East Compressor Station.....	828	0	0	0
Loco Compressor Station.....	929	0	0	0
Brazos Compressor Station.....	762	0	0	0
X-ray Compressor Station.....	620	0	0	0
Brad Compressor Station.....	500	0	0	0
Ranger Number 1 Compressor Station.....	601	0	0	0
Ranger Number 2 Compressor Station.....	500	0	0	0
Eastland Compressor Station.....	1,244	0	0	0
Moran Compressor Station.....	263	0	0	0
Alvord Compressor Station.....	125	0	0	0
Cheaney Compressor Station.....	944	0	0	0
Desdemona Compressor Station.....	635	0	0	0
Gainesville Compressor Station.....	430	0	0	0
Tiffin Compressor Station.....	650	0	0	0
Warehouses.....	1,200	0	0	0
County Maps.....	0	6,499	1,097	1,097
Sectional Maps.....	0	4,766	733	733
System Maps.....	0	2,657	0	854
Co-operative Maps.....	0	2,038	314	314
Field Maps.....	0	6,475	1,233	1,233
Totals.....	<u>25,830</u>	<u>22,435</u>	<u>3,377</u>	<u>4,231</u>

## Defendant's Exhibit No. 28—Continued

[fol. 8281] Second Year Photostating

## Full Sheets

	Preliminary	Final
Land and Legal Department .....	496	0
Accounting Department .....	898	165
Treasury Department .....	110	88
Engineering Department .....	330	0
Statistical Department .....	330	330
Operating Department .....	110	110
Safety Department .....	55	0
Geological Department .....	165	55
Executive Department .....	82	82
Industrial Department .....	82	0
Stargas Department .....	137	0
Total .....	2,795	830

[fol. 8282] Floor Space Requirement

Personnel	Square Feet		Total
	Number	Each	
Chief Engineer .....	1	323	323
Secretary of Chief Engineer .....	1	209	209
Office Engineer .....	1	228	228
Statistical Engineer .....	1	200	200
Computers .....	5	90	450
Inventory men .....	3	90	270
Stenographers .....	5	60	300
Field Engineers .....	3	60	180
Designing Engineer .....	1	200	200
Designers .....	4	80	320
Chief Draftsman .....	1	200	200
Assistant Chief Draftsmen .....	5	80	400
Draftsmen .....	76	60	4,560
File Room .....	1	329	329
Blueprint and Photostat Room .....	1	418	418
Engineering Supply Room .....	1	52	52
Blueprint Supply Room .....	1	28	28
Map Room .....	1	323	323
Total Square Feet .....			8,990

2826

[fol. 8283]      Third Year Engineering

(Here follows 1 photolithograph, side folio 8284)

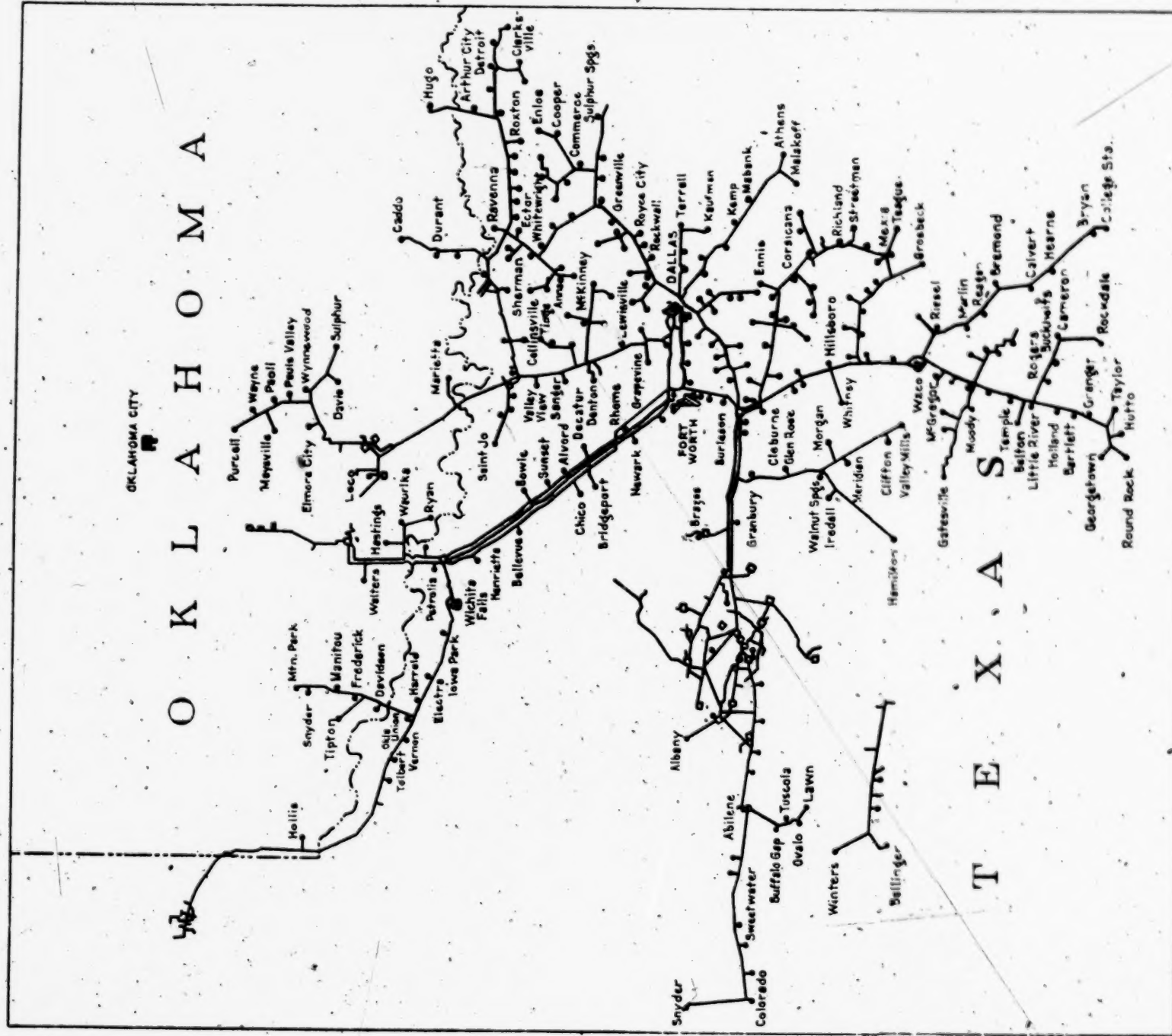
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**PAGE**



8284

A horizontal scale bar with tick marks at 0, 10, 20, 30, and 40. The word "Miles" is written below the bar.



REUFFER & EBERM CO., N. Y. NO. 138-5  
10 x 10 to the inch.

2826A



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**PAGE**

## Defendant's Exhibit No. 28—Continued

[fol. 8285]

Traveling Expenses, Fees, and Payroll for Third Year of Engineering  
General Engineering Cost

Chief Engineer.....	\$12,000.00	
Secretary of Chief Engineer.....	2,100.00	
Office Engineer		
52 year at.....	\$4,800.00	2,496.00
		<u>\$16,596.00</u>
Statistical Engineer		
83 year at.....	3,600.00	2,988.00
Computers 2.53 at.....	2,400.00	6,072.00
Inventory Men		
1.24 at.....	2,040.00	2,529.60
Stenographer (Head of Group).....		1,620.00
Stenographers		
73 year at.....	1,500.00	1,095.00
		<u>14,304.60</u>
Field Engineer (Head of Group).....	3,600.00	
Field Engineers		
1.70 at.....	3,300.00	5,610.00
		<u>9,210.00</u>
Designing Engineer.....		3,600.00
Designers 2.06 at.....	3,000.00	6,180.00
		<u>9,780.00</u>
Chief Draftsman		
46 year at.....	3,600.00	1,656.00
Ass't Chief Draftsman (Head of Group).....		3,300.00
Ass't Chief Draftsmen		
36 year at.....	3,000.00	1,080.00
Draftsmen 20.36 at.....	2,040.00	41,534.40
File Clerk (Head of Group).....		1,800.00
File Clerk		
36 year at.....	1,500.00	540.00
Photostat Operator		
51 year at.....	1,920.00	979.20
Blueprint Operator		
74 year at.....	1,920.00	1,420.00
Blueprint-Photostat Helper		
31 year at.....	1,800.00	558.00
		<u>52,868.40</u>
Car cost 3.70 at.....	2,100.00	7,770.00
Expenses 3.70 men at.....	1,500.00	5,550.00
Helpers counting houses—145 days at \$4.00.....		580.00
Consulting fees.....		<u>10,000.00</u>
Total.....		<u>\$126,659.00</u>

[fol. 8286]

Traveling Expenses and Payroll for Third Year of Engineering  
Reproduction Cost of Final Engineering Records

Office Engineer		
48 year at.....	\$4,800.00	\$2,304.00
Statistical Engineer		
17 year at.....	3,600.00	\$612.00
Inventory men		
23 year at.....	2,040.00	469.20
Stenographers		
88 year at.....	1,500.00	1,320.00
		<u>2,401.20</u>
Field Engineers		
3.18 at.....	3,300.00	<u>10,494.00</u>

## Defendant's Exhibit No. 28—Continued

Chief Draftsman			
.54 year at .....	3,600.00	1,944.00	
Ass't Chief Draftsman			
1.66 year at .....	3,000.00	4,980.00	
Draftsmen			
24.91 at .....	2,040.00	50,816.40	
Photostat Operator			
.49 at .....	1,920.00	940.80	
Blueprint Operator			
.26 year at .....	1,920.00	499.20	
Blueprint-Photostat Helper .19 year at...	1,800.00	342.00	
			62,012.40
Car Cost 3.18 year at .....	2,100.00		6,678.00
Expenses 3.18 man at .....	1,500.00		4,770.00
Total .....			<u>\$88,659.60</u>

[fol. 8287]

Engineering Personnel Required for the Third Year of Engineering  
General Engineering Cost

Chief Engineer.....Entire year  
Secretary of Chief Engineer.....Entire year

## Office Engineer

Total work done under his supervision, Third Year. 71.86 Years  
Work done under his supervision, general engineering cost, Third Year..... 37.50 Years  
 $37.50 \text{ divided by } 71.86 = .52 \text{ Office Engineer Years}$

## Statistical Engineer

Total work done under his supervision, Third Year. 6.62 Years  
Work done under his supervision, general engineering cost, Third Year..... 5.50 Years  
 $5.50 \text{ divided by } 6.62 = .83 \text{ Statistical Engineer Years}$   
Computers as shown in detail..... 4,879 Hours  
Plus 10% Omissions and Contingencies..... 488

Total..... 5,367 Hours  
 $5,367 \text{ divided by } 2118 = 2.53 \text{ Computer Years}$

## Inventory men, as shown in detail,

Preliminary Third Year..... 2,394 Hours  
Plus 10% Omissions and Contingencies..... 239

Total..... 2,633 Hours  
 $2,633 \text{ divided by } 2118 = 1.24 \text{ Inventory men Years}$

## Stenographers as shown in detail,

Preliminary Third Year..... 3,325 Hours  
Plus 10% Omissions and Contingencies..... 332

Total..... 3,657 Hours  
 $3,657 \text{ divided by } 2118 = 1.73 \text{ Stenographer Years}$

## Defendant's Exhibit No. 28—Continued

## Field Engineers

Survey Party Days, as shown in Detail, Preliminary Third Year .....	1,283 Days
1,283 divided by 3 = 428 Field Engineer Days	
Obtaining data for calculating Pressure, volumes, etc., 231 plus 428 =	659 Days
659 divided by 244 = 2.70 Field Engineer Years	
Designing Engineer .....	Entire year
[fol. 8288]	
Designers, as shown in detail .....	3,981 Hours
Plus 10% Omissions and Contingencies .....	398
Total .....	4,379 Hours
4,379 divided by 2118 = 2.06 Designer Years	

## Chief Draftsman

Total work done under his supervision, Third Year.	54.31 Years
Work done under his supervision, general engineer- ing cost, Third Year .....	24.95 Years
24.95 divided by 54.31 = .46 Chief Draftsman Years	
Assistant Chief Draftsman—1 for each 15 Draftsmen	
20.36 divided by 15 = 1.36 Ass't Chief Draftsmen Years	

## Draftsmen as shown in detail,

Preliminary Third Year .....	39,198 Hours
Plus 10% Omissions and Contingencies .....	3,920
Total .....	43,118 Hours
43,118 divided by 2118 = 20.36 Draftsmen Years	

## File Clerks—1 for each 15 Draftsmen

20.36 divided by 15 = 1.36 File Clerk Years	
Photostat Operator .....	.51 Years
Blueprint Operator .....	.74 Years
Blueprint-Photostat Helper .....	.31 Years

[fol. 8289] Engineering Personnel Required for  
the Third Year of Engineering

## Reproduction Cost of Final Engineering Records

## Office Engineer

Total work done under his supervision Third Year ..	71.86 Years
Work done under his supervision, Reproduction cost of Final Engineering Records .....	34.36 Years
34.36 divided by 71.86 = .48 Office Engineer Years	

## Statistical Engineer

Total work done under his supervision, Third Year	6.62 Years
Work done under his supervision, Reproduction cost of Final Engineering Records .....	1.11 Years
1.11 divided by 6.62 = .16 Statistical Engineer Years	

## Defendant's Exhibit No. 28—Continued

## Inventory Men, as shown in detail,

Final Second Year .....	451 Hours
Plus 10% Omissions and Contingencies .....	45
Total .....	496 Hours
496 divided by 2118 = .23 Inventory men Years	

## Stenographers, as shown in detail,

Final Second Year .....	1,696 Hours
Plus 10% Omissions and Contingencies .....	170
Total .....	1,866 Hours
1,866 divided by 2118 = .88 Stenographer Years	

## Field Engineers

## Survey Party days as shown in detail,

Final Second Year .....	2,324 Days
2,324 divided by 3 = 775 Field Engineer Days	
775 divided by 244 = 3.18 Field Engineer Days	

## Chief Draftsman

## Total work done under his supervision

Third Year .....	54.31 Years
Work done under his supervision, Reproduction cost of Final Engineering Records .....	29.36 Years
29.36 divided by 54.31 = .54 Chief Draftsman Years	

## Assistant Chief Draftsmen—1 for each 15 Draftsmen

24.91 divided by 15 = 1.66 Ass't Chief Draftsmen Years

## Draftsmen, as shown in detail,

Final Second Year .....	47,973 Hours
Plus 10% Omissions and Contingencies .....	4,797
Total .....	52,770 Hours
52,770 divided by 2118 = 24.91 Draftsmen Years	

[fol. 8290]

## File Clerks—1 for each 15 Draftsmen

24.91 divided by 15 = 1.66 File Clerk Years

Photostat Operator .....	.49 Year
Blueprint Operator .....	.26 Year
Blueprint-Photostat Helper .....	.19 Year

## Defendant's Exhibit No. 28—Continued

[fol. 8291]

## Third Year Details

[fol. 8292]

## Statistical Engineer—Third Year

	Compu- ters	Inventory Men		Stenographers	
	Prelim.	Prelim.	Final	Prelim.	Final
A Line taps, measuring Stations, and other Structures.....	342	114	26	149	36
B Line taps, measuring stations, and other Structures.....	178	46	12	74	15
C Line taps, measuring Stations, and other Structures.....	69	16	6	31	5
E Line taps, measuring Stations, and other Structures.....	395	207	41	223	57
F Line taps, measuring Stations, and other Structures.....	249	101	18	119	28
G Line taps, measuring Stations, and other Structures.....	371	239	29	217	63
H Line taps, measuring Stations, and other Structures.....	206	130	17	109	32
J-2 Line taps, measuring Stations, and other Structures.....	116	25	12	53	11
K Line taps, measuring Stations, and other Structures.....	410	185	29	171	50
L Line taps, measuring Stations, and other Structures.....	7.8	382	71	403	102
M Line taps, measuring Stations, and other Structures.....	559	275	56	340	74
O Line taps, measuring Stations, and other Structures.....	891	442	89	534	136
Well Lines.....	124	51	47	58	31
U. S. Navy Line.....	67	121	5	56	24
Hollis Warehouse and Camp.....	39	10	0	16	4
Railroad and Highway Crossings, checking and transmitting pre- liminary alignments.....	145	0	0	222	0
Filing (All Engineering Depart- ment except Notes and Draw- ings).....	0	0	0	550	550
Total.....	<u>4,879</u>	<u>2,394</u>	<u>458</u>	<u>3,325</u>	<u>1,218</u>

[fol. 8293] House Count and All Other Data for Calculating Loads

## Third Year

Town	Field Engr. Days	Number of Helpers	Helpers Man Days
Abbott .....	1	0	0
Allen .....	1	0	0
Alvarado .....	1	1	1
Anna .....	1	0	0
Athens .....	1	2	2



## Defendant's Exhibit No. 28—Continued

Town	Field Engr.	Number of	Helpers
	Days	Helpers	Man Days
Aubrey	1	0	0
Bagwell	1	0	0
Bardwell	1	0	0
Barry	1	0	0
Bartlett	1	1	1
Bells	1	0	0
Belton	1	2	2
Blooming Grove	1	0	0
Blossom	1	0	0
Bremond	1	0	0
Britton	1	0	0
Brookston	1	0	0
Bryan	1	6	6
Buckholts	1	0	0
Buckner's O. H.	1	0	0
Buffalo Gap	1	0	0
Belle Meade	1	0	0
Caddo Mills	1	0	0
Calvert	1	1	1
Cameron	1	3	3
Campbell	1	0	0
Carrollton	1	0	0
Cedar Hill	1	0	0
Celeste	1	0	0
Celina	1	0	0
Chico	1	0	0
Chillicothe	1	1	1
Clifton	1	1	1
Chilton	1	0	0
College Station	2	1	2
Collinsville	1	0	0
Commerce	1	4	4
Cooledge	1	0	0
Cooper	1	1	1
Covington	1	0	0
Crandall	1	0	0
Cumby	1	0	0
Dawson	1	1	1
Deport	1	0	0
Detroit	1	0	0

## Defendant's Exhibit No. 28—Continued

Town	Field Engr. Days	Number of Helpers	Helpers Man Days
Dodd City	1	0	0
Duncanville	1	0	0
Ector	1	0	0
[fol. 8294] Eddy	1	0	0
Electra	1	6	6
Elm Mott	1	0	0
Emhouse	1	0	0
Enloe	1	0	0
Fairlie	1	0	0
Farmersville	1	1	1
Fatel	1	0	0
Ferris	1	1	1
Forney	1	1	1
Forreston	1	0	0
Frisco	1	1	1
Frost	1	0	0
Fulbright	1	0	0
Gatesville	1	3	3
Garland	1	2	2
Glen Rose	1	0	0
Granbury	1	1	1
Grandview	1	0	0
Granger	1	1	1
Grapevine	1	1	1
Gordon	1	0	0
Grosebeck	1	1	1
Hamilton	1	2	2
Handley	1	4	4
Harrold	1	0	0
Hearne	1	2	2
Holland	1	0	0
Howe	1	0	0
Hubbard	1	1	1
Hutchins	1	0	0
Iredell	1	0	0
Irving	1	0	0
Italy	1	1	1
Itasca	1	2	2
Josephine	1	0	0

## Defendant's Exhibit No. 28—Continued

Town	Field Engr. Days	Number of Helpers	Helpers Man Days
Keene	1	0	0
Kemp	1	0	0
Kerens	1	1	1
Ladonia	1	0	0
Lancaster	1	1	1
Lawn	1	0	0
Leonard	1	0	0
Lewis Poultry Colony	1	0	0
Lewisville	1	0	0
Lillian	1	0	0
Lindsay	1	0	0
Little River	1	0	0
Lorraine	1	0	0
Lorena	1	0	0
Lott	1	0	0
Mabank	1	0	0
[fol. 8295] Malakoff	1	0	0
Malone	1	0	0
Mansfield	1	0	0
Marlin	1	5	5
Mart	1	2	2
May Pearl	1	0	0
Melissa	1	0	0
Meridian	1	0	0
Merkel	1	0	0
Mesquite	1	0	0
Midlothian	1	0	0
Milford	1	0	0
Moody	1	0	0
Morgan	1	0	0
McGregor	1	1	1
Meunster	1	0	0
Myra	1	0	0
Nevada	1	0	0
Newark	1	0	0
Oglesby	1	0	0
Oklaunion	1	0	0
Osceola	1	0	0
Ovalo	1	0	0
Palmer	1	0	0

## Defendant's Exhibit No. 28—Continued

Town	Field Engr. Days	Number of Helpers	Helpers Man Days
Pecan Gap	1	0	0
Penelope	1	0	0
Peniel	1	0	0
Petty	1	0	0
Pilot Point	1	0	0
Plano	1	1	1
Powell	1	0	0
Prosper	1	0	0
Ravenna	1	0	0
Reagan	1	0	0
Rhome	1	0	0
Richardson	1	0	0
Reisel	1	0	0
Rockdale	1	1	1
Rockwall	1	1	1
Rogers	1	0	0
Roscoe	1	0	0
Rosébud	1	0	0
Rowlett	1	0	0
Royse City	1	0	0
Roxton	1	0	0
Saginaw	1	0	0
Saint Jo	1	0	0
Sanger	1	1	1
Savoy	1	0	0
Seagoville	1	0	0
Scurry	1	0	0
Sulphur Springs	1	4	4
Streetman	1	0	0
[fol. 8296] Teague	1	2	2
Tehuacana	1	0	0
Tioga	1	0	0
Tolbert	1	0	0
Trent	1	0	0
Trenton	1	0	0
Troy	1	0	0
Tuscola	1	0	0
Urbandale	1	0	0
Valley Mills	1	0	0
Valley View	1	0	0
Van Alstyne	1	1	1

## Defendant's Exhibit No. 28—Continued

Town	Field Engr. Days	Number of Helpers	Helpers Man Days
Venus	1	0	0
Vernon	2	7	14
Walnut Springs	1	0	0
West	1	2	2
Westminster	1	0	0
Whitewright	1	1	1
Whitney	1	1	1
Wilmer	1	0	0
Windom	1	0	0
Wolfe City	1	0	0
Wortham	1	1	1
Wylie	1	0	0
Achille	1	0	0
Caddo	1	0	0
Davidson	1	0	0
Davis	1	1	1
Elmore City	1	0	0
Frederick	1	6	6
Hastings	1	0	0
Hollis	1	3	3
Loco	1	0	0
Manitou	1	0	0
Marietta	1	1	1
Maysville	1	0	0
Mountain Park	1	0	0
Pauls Valley	1	5	5
Paoli	1	0	0
Purcell	1	2	2
Ryan	1	1	1
Snyder, Oklahoma	1	2	2
Sulphur	1	3	3
Tipton	1	1	1
Walters	1	3	3
Waurika	1	4	4
Wayne	1	0	0
Wynnewood	1	2	2
Byers	1	0	0
Petrolia	1	0	0
Bellevue	1	0	0
Sunset	1	0	0
Alvord	1	0	0

## Defendant's Exhibit No. 28—Continued

[fol. 8297]

Town	Field Engr. Days	Number of Helpers	Helpers Man Days
Iowa Park.....	1	1	1
Temple, Oklahoma.....	1	0	0
Total.....	210		132
Plus 10% for investigating towns and communities that would not be served.....	21		13
Total.....	231		145

[fol. 8298]

## Third Year Surveying Party Days

	Prelim.	Final
A Line taps, measuring stations and all Structures.....	63	71
B Line taps, measuring stations and all Structures.....	21	30
C Line taps, measuring stations, and all Structures.....	5	9
E Line taps, measuring stations, and all Structures.....	109	113
F Line taps, measuring stations, and all Structures.....	50	56
G Line taps, measuring stations, and all Structures.....	128	125
H Line taps, measuring stations, and all Structures.....	68	64
J-2 Line taps, measuring stations, and all Structures.....	7	21
K Line taps, measuring stations, and all Structures.....	106	100
L Line taps, measuring station, and all Structures.....	202	204
M Line taps, measuring stations, and all Structures.....	142	147
O Line taps, measuring stations, and all Structures.....	263	271
Well lines.....		31
U. S. Navy Line and all structures.....		48
Hollis Warehouse and Pernell Camp.....	2	8
	1,166	1,298
Plus 10% Omissions and Contingencies.....	117	130
Total.....	1,283	1,428

[fol. 8299]

## Third Year Designing Time

	Hours
Measuring Stations.....	3,941
River Crossings.....	24
Camp Sites.....	14
Miscellaneous.....	2
Total.....	3,981



## Defendant's Exhibit No. 28—Continued

(fols. 8300-8334)

## Maps, Plans, and Drawings—3rd Year

## Labor—Draftsmen Only

Alignment Sheets No.	Drawing	Size in Inches	Preliminary Hours	Final Hours
6	Line A-1.....	15. 5x36	320	290
5	Line A-1-4.....	15. 5x36	265	238
1	Line A-2—Iowa Park Tap.....	15. 5x36	40	48
1	Line A-3—Harrold Tap.....	15. 5x36	40	45
1	Line A-4—Vernon Tap.....	15. 5x36	40	45
1	Line A-6—Chillicothe Tap.....	15. 5x36	40	45
1	Line A-8—Hollis Tap.....	15. 5x36	52	48
1	Line A-10—Electra Tap.....	15. 5x36	40	45
1	Line A-15—Bartex Pipe Line Company Tap.....	15. 5x36	40	45
1	Line B-1—Bellevue Tap.....	15. 5x36	53	48
1	Line B-3—Sunset Tap.....	15. 5x36	53	48
1	Line B-4—Alvord Tap.....	15. 5x36	50	46
1	Line B-6—Rhome Tap.....	15. 5x36	50	46
1	Line B-9—Texas Company Tap.....	15. 5x36	50	46
1	Line B-10—Saginaw Tap.....	15. 5x36	50	46
1	Line B-11—Newark Tap.....	15. 5x36	50	46
1	Line B-13—Chico Tap.....	15. 5x36	52	48
17	U. S. Navy Line.....	15. 5x36	900	816
1	Line C-1.....	15. 5x36	40	45
1	Line C-5—Riverside Tap.....	15. 5x36	55	50
1	Line C-7.....	15. 5x36	26	30
1	Line E-1-A—Simpson Fell Well No. 1..	15. 5x36	54	50
1	Line 2nd E-1-A—Pottsboro Field....	15. 5x36	54	50
2	Line E-5—Durant to Caddo.....	15. 5x36	105	96
1	Line E-8—Dodd City Tap.....	15. 5x36	53	48
6	Line E-10—E Line to Melissa.....	15. 5x36	320	290
1	Line E-10-3—Trenton Tap.....	15. 5x36	52	48
1	Line E-10-4—Westminster Tap.....	15. 5x36	50	46
2	Line E-10-5—E-10 Line to Howe.....	15. 5x36	103	94
1	Line E-10-6—E Line to Bells.....	15. 5x36	52	48
1	Line E-11—Windom Tap.....	15. 5x36	50	46
1	Line E-12—Brookston Tap.....	15. 5x36	35	45
1	Line E-13—Petty Tap.....	15. 5x36	35	45
1	Line E-14—Roxton Tap.....	15. 5x36	50	46
1	Line E-15—Collingsville Tap.....	15. 5x36	52	48
1	Line E-17—Ravenna Tap.....	15. 5x36	50	46
1	Line E-19—Blossom Tap.....	15. 5x36	35	45
1	Line E-20—Detroit Tap.....	15. 5x36	35	45
1	Line E-21—Bagwell Tap.....	15. 5x36	35	45
2	Line E-22.....	15. 5x36	105	96
1	Line E-22-1—Deport Tap.....	15. 5x36	53	48
2	Line F-2-1—F-2 Line to Celina.....	15. 5x36	105	96

## Defendant's Exhibit No. 28—Continued

(fol. 8335)

Field Maps No.	Drawing	Size in Inches	Preliminary Hours	Final Hours
1	Pottsboro Field Lines, cloth print for office records.....	30x40	2	.....
1	Pottsboro Field Lines.....	30x40	96	.....
4	Leeray Field Maps.....	.....	520	.....
1	Eastland Field Map.....	.....	82	.....
2	Mingus and East Mingus Maps.....	.....	143	.....
1	Breckenridge Field Map.....	.....	70	.....
1	Cheaney Field Map.....	.....	88	.....
1	Desdemona Field Map.....	.....	66	.....
1	Fox Field Map.....	.....	66	.....
1	East Fox Field Map.....	.....	55	.....
1	Wheeler County Field.....	.....	240	.....
4	Northwest Shamrock Field, Northeast Shamrock Field, Southeast Sham- rock Field, and Southwest Shamrock Field Maps.....	.....	234	.....
1	South Robberson Field.....	30x40	.....	55
1	South Robberson Field Map for office records.....	.....	3	.....
150	System Maps.....	30x40	6000	.....
Miscellaneous Drawings				
1	Line E-10 on Scott Dumas property...	8.5x11	6	.....
1	Riverside line to Transcontinental Oil Company, Fort Worth, Texas.....	8.5x11	4	.....
2	Bridgeport Brick Company—Ferris Layout.....	8.5x11	5	.....
1	Typical drawing of Plan and Elevation of Piping and Location of measuring station.....	20x30	.....	22
1	Typical drawing of 4 inch measuring station with 2 inch high pressure regulators.....	20x30	.....	17
1	Typical drawing of Plan and Elevation for measuring Station.....	20x30	37	33
1	Typical drawing of piping plan for measuring station.....	20x30	37	33
	Mounting System Map.....	.....	368	.....
Total.....			<u>39,198</u>	<u>30,449</u>

## Defendant's Exhibit No. 28—Continued

[fol. 8336] General Expense

[fol. 8337] Summary

General Engineering Cost	
Item	Amount
Office Equipment *	\$842.21
County Maps	246.00
Office and Field Supplies	3,031.43
Surveying Equipment Cost*	838.18
Telephones	520.34
Toll Charges	1,291.68
Telegrams	215.28
Total	<u>\$6,985.12</u>

[fol. 8338] General Expense

Summary

## Reproduction Cost of Final Engineering Records

Item	Amount
Office Equipment *	\$717.44
Office and Field Supplies	2,912.55
Surveying Equipment Cost *	1,490.10
Telephones	192.46
Toll Charges	2,296.32
Telephones	382.72
Total	<u>\$7,991.59</u>

## Defendant's Exhibit No. 28—Continued

[fol. 8339]

## Third Year Details

## [fol. 8340] Engineering Department Office Equipment Cost—Third Year

No. In Use	Item	Total Value Each	Total Value and Depreciation	Amount Charged to Third Year
1	Golden oak desk—glass top 60x30 inches.....	\$79.10	\$79.10 at 8%	\$6.33
1	Golden oak table—glass top 72x36 inches.....	58.50	58.50 at 8%	4.68
4	Golden oak swivel arm chairs leather seats.....	22.00	88.00 at 8%	7.04
12	Golden oak arm chairs—straight.....	11.85	142.20 at 8%	11.38
5	Golden oak—4 Section Book cases with top base.....	43.90	219.50 at 8%	17.56
1	Golden Oak telephone table...	10.80	10.80 at 8%	.86
13	Golden oak costumers.....	7.40	96.20 at 8%	7.70
8	Golden oak globe letter trays single.....	1.60	12.80 at 8%	1.02
1	Rug—14x16 feet.....	212.50	212.50 at 8%	17.00
2	Smoking Stands.....	6.34	12.68 at 8%	1.01
2	Sheaffer double fountain pen desk sets.....	20.00	40.00 at 8%	3.20
8	Golden oak system map frames	12.50	100.00 at 8%	8.00
2	Thermos Bottles with tray and glasses.....	11.40	22.80 at 8%	1.82
47	Steel mesh waste baskets.....	.90	42.30 at 15%	6.35
2	Brass cuspidors.....	2.07	4.14 at 8%	.33
47	Enameled steel cuspidors.....	.85	39.95 at 8%	3.20
49	Rubber cuspidor mats.....	.42	20.58 at 25%	5.15
8	Staffords Self inking stamp pads.....	.29	2.32 at 25%	.58
	Rubber stamps.....		38.25 at 20%	7.65
2	Bostich staple machine—Exec. type.....	7.50	15.00 at 8%	1.20
35	Autopoint bakelite pencils....	.40	14.00 at 8%	1.12
9	Engineer's Scales—12 inches..	3.24	29.16 at 8%	2.33
8	Architect's Scales—12 inches..	3.24	25.92 at 8%	2.07
6	Polyphase Duplex slide rules—10 inches in case.....	8.42	50.52 at 8%	4.04
4	Golden oak typewriter desks—60x34 inches.....	54.60	218.40 at 8%	17.47
5	Adjustable steel chairs—leather back and seat.....	17.43	69.72 at 8%	5.58
1	Golden oak settee—48 inches..	42.00	42.00 at 8%	3.36
18	Berloy steel filing cabinets....	27.30	491.40 at 8%	39.31
4	Royal Standard typewriters....	83.03	332.12 at 8%	26.57
4	Remington Line-A-Times.....	21.00	84.00 at 8%	6.72
4	Sheaffer single fountain pen desk sets.....	12.00	48.00 at 8%	3.84
1	Rug—10x14 feet.....	132.00	132.00 at 8%	10.56
2	Secretary's Handbooks.....	3.50	7.00 at 8%	.56
2	Dictionaries.....	5.00	10.00 at 8%	.80
21	Bostich staple machines—standard.....	3.02	63.42 at 8%	5.07

## Defendant's Exhibit No. 28—Continued

[fol. 8341]

## Engineering Department Office Equipment Cost—Third Year

No. In Use	Item	Total Value Each	Total Value and Depreciation	Amount Charged to Third Year
4	Card Index Cases.....	.60	2.40 at 8%	.19
1	Desk blotter holder.....	5.50	5.50 at 8%	.44
72	Sets alphabetical indexes for files.....	.95	68.40 at 25%	17.10
5	Dexter Pencil Sharpeners—No. 2.....	3.93	16.65 at 8%	1.57
1	Golden oak desk with glass top—66x36 inches.....	84.00	84.00 at 8%	6.72
1	Golden oak table with glass top—72x34 inches.....	58.00	58.00 at 8%	4.64
1	Rug—12x14 feet.....	158.70	158.70 at 8%	12.70
13	Golden oak desks—60x34 inches.....	54.60	709.80 at 8%	56.78
12	Golden oak swivel chairs—leather seats.....	18.50	222.00 at 8%	17.76
2	Golden oak tables—60x34 inches.....	30.80	61.60 at 8%	4.93
4	Golden oak chairs.....	7.50	22.50 at 8%	1.80
1	Plainimeter.....	45.00	45.00 at 8%	3.60
2	Marchant Electric Calculators.....	425.00	850.00 at 8%	68.00
2	Walraven Extension Binders No. L-5840.....	7.20	14.40 at 8%	1.15
1	Walraven Extension Binders No. L-5888.....	8.44	8.44 at 8%	.67
4	Vance K. Miller Binders No. 541-A.....	1.25	5.00 at 8%	.40
1	Underwood Typewriter—26 inch carriage.....	137.70	137.70 at 8%	11.02
2	Golden oak tables 72x34 inches.....	35.00	70.00 at 8%	5.60
3	Sheridan Adjustable drawing tables No. 2263.5-B.....	65.00	195.00 at 8%	15.60
3	Golden oak desk chairs—leather seats.....	18.50	55.50 at 8%	4.44
7	Tee squares — adjustable heads 42 inches.....	5.94	41.58 at 8%	3.33
7	45 degree Triangles—18 in....	5.41	30.87 at 8%	2.47
7	30-60 Triangles—18 in.....	3.06	21.42 at 8%	1.71
	Steel Shelving.....		182.25 at 8%	14.58
50	Drafting tables—60x34 inches with drawers.....	26.25	1,312.50 at 8%	105.00
50	Adjustable wooden drafting stools.....	12.92	646.00 at 8%	51.68
46	Tee Squares—42 inches.....	2.86	131.56 at 8%	10.52
1	Globe Wernicke filing cabinet No. 7310-C.....	1.20	1.20 at 8%	.10
2	Beam compasses in case.....	12.25	24.50 at 8%	1.96
3	Sets proportional dividers....	12.50	37.50 at 8%	3.00
1	Set Wrice lettering guides....	35.00	35.00 at 8%	2.80
4	Steel straight edges—48 in....	7.56	30.24 at 8%	2.42
4	Vernier Protractors.....	9.00	36.00 at 8%	2.88
1	Golden oak table—88x30 in....	48.50	48.50 at 8%	.388

## Defendant's Exhibit No. 28—Continued

342]

## Engineering Department Office Equipment Cost—Third Year

Item	Total Value Each	Total Value and Depreciation	Amount Charged to Third Year
Hamilton File Drawer Bases..	6.00	12.00 at 8%	.96
Hamilton 5 Drawer files.....	28.50	370.50 at 8%	29.64
Hamilton file drawer tops.....	6.00	18.00 at 8%	1.44
Hamilton file drawer—with base.....	18.70	18.70 at 8%	1.50
Hamilton file drawer.....	12.00	12.00 at 8%	.96
Vertical steel map file.....	300.00	300.00 at 8%	24.00
Steel Supply cabinet.....	32.00	32.00 at 8%	2.56
Pigeon hole horizontal map files.....	65.00	130.00 at 8%	10.40
Steel mesh waste basket—30 inches high.....	3.15	3.15 at 15%	.47
File cases for scout tickets—double.....	10.00	70.00 at 8%	5.60
Scissors—14 inches.....	3.75	15.00 at 20%	3.00
Step ladders—3 feet high.....	2.00	4.00 at 8%	.32
Oil cans—with spouts—for cleaning fluid.....	.25	2.50 at 20%	.50
Pease blueprint machine—54 inches.....	1,716.00	1,716.00 at 8%	137.28
Photostat machine.....	1,188.00	1,188.00 at 8%	95.04
Paragon blueprint dryer—54 inches.....	759.00	759.00 at 8%	60.72
Pako Photo Dryer.....	176.00	176.00 at 8%	14.08
Cooper-Hewitt Mercury Tube lights.....	80.00	160.00 at 8%	12.80
Photostat Washer.....	82.50	82.50 at 8%	6.60
Blueprint Washer—54 inches.....	68.00	68.00 at 8%	5.44
Drying rack for negatives.....	41.80	41.80 at 8%	3.34
Blueprint table 45x66 inches..	38.50	38.50 at 8%	3.08
Table—32x60 inches for dryer.	3.85	3.85 at 8%	.31
Straight oak chair.....	5.00	5.00 at 8%	.40
G. I. Waste paper can.....	2.50	2.50 at 20%	.50
Blueprint paper can.....	5.00	5.00 at 8%	.40
Photo Trimmer — Eastman—18x18 Inches.....	35.00	35.00 at 8%	2.80
Loose-Leaf Folders 8.5x11 in..	.88	1.76 at 25%	.44
Piece Plate Glass—24x30 inches—Gr. Edge.....	4.50	4.50 at 25%	1.13
Golden oak map cases.....	1,309.00	5,236.00 at 8%	418.88
No. 60 Marvel Punch.....	1.65	1.65 at 8%	.13
Improved Hummer punch—4 heads.....	9.90	9.90 at 8%	.79
Technical Reference Books...	382.50	382.50 at 8%	30.60
<b>Totals.....</b>	<b>\$19,161.10</b>		<b>\$1,559.65</b>
for General Engineering Cost.....			<b>\$842.21</b>
for Reproduction Cost of Final Engineering Records.....			<b>717.44</b>



## Defendant's Exhibit No. 28—Continued

[fol. 8343]

## County Maps Purchased—Third Year

Texas	No. Maps	Cost Each	Amount
Rains.....	1	\$2.00	\$2.00
Van Zandt.....	1	2.00	2.00
Henderson.....	3	2.00	6.00
Anderson.....	1	2.00	2.00
Leon.....	1	2.00	2.00
Robertson.....	3	2.00	6.00
Brazos.....	3	2.00	6.00
Grimes.....	5	3.50	17.50
Milam.....	4	5.00	20.00
Burleson.....	1	2.00	2.00
Lee.....	1	2.00	2.00
Travis.....	1	2.00	2.00
Burnett.....	1	2.00	2.00
Lampasas.....	1	2.00	2.00
Corvell.....	3	2.00	6.00
Bosque.....	3	2.00	6.00
Hamilton.....	3	2.00	6.00
Mills.....	1	2.00	2.00
Concho.....	1	3.50	3.50
Tom Green.....	1	6.00	6.00
Coke.....	1	6.00	6.00
Stonewell.....	1	6.00	6.00
Baylor.....	1	6.00	6.00
Knox.....	1	6.00	6.00
Foard.....	1	6.00	6.00
Hall.....	1	6.00	6.00
McCulloch.....	1	6.00	6.00
San Saba.....	1	2.00	2.00
King.....	1	6.00	6.00
Cottle.....	1	6.00	6.00
Sommervell.....	3	2.00	6.00
Haskell.....	1	6.00	6.00
Delta.....	3	2.00	6.00
Hopkins.....	3	2.00	6.00
Oklahoma			
Grady.....	3	3.50	10.50
Johnston.....	1	3.50	3.50
Atoka.....	1	3.50	3.50
Coal.....	1	3.50	3.50
Pontotoc.....	1	3.50	3.50
Kiowa.....	3	3.50	10.50
Caddo.....	3	3.50	10.50
Pittsburg.....	5	3.50	17.50
Total.....			<u>\$246.00</u>

## Defendant's Exhibit No. 28—Continued

[fol. 8344]		Engineering Department Supply Cost		
		Third Year		
No. Units Used	Unit	Items	Unit Cost	Amount
208	Boxes	Gem Clips.....	\$ .02	\$4.16
16	Pounds	Rubber Bands.....	.40	6.40
80	Boxes	Autopoint Pencil leads.....	.26	20.80
15	Boxes	Blank Pins.....	.36	5.40
5	Quarts	Blue-Black Fountain Pen ink.....	.90	4.50
1	Quart	Red Fountain Pen Ink.....	1.20	1.20
6	Each	Memorandum and date pads.....	.50	3.00
29	Boxes	Bostich staples.....	1.28	37.12
825	Each	Autopoint pencil erasers.....	.0087	7.18
375	Each	Fiberstock Pockets No. 1514-C.....	.136	51.00
24	Boxes	Carbon Paper—8.5x11 Inches.....	1.80	43.20
1,950	Each	Letterheads—printed.....	.0035	6.83
5,550	Each	Yellow Copy sheets.....	.004	2.22
10,375	Each	Thin Copy sheets.....	.0009	9.34
1,250	Each	Interoffice letterheads.....	.0008	1.00
250	Each	Interoffice envelopes.....	.005	1.25
5,000	Each	Letterheads—plain.....	.0028	13.44
7,000	Each	Small envelopes—stamped.....	.0322	225.40
2,800	Each	Large envelopes—stamped.....	.0329	92.12
24	Each	Typewriter ribbons.....	.46	11.04
16	Each	Typewriter erasers.....	.06	.96
1,000	Each	Manila folders.....	.0135	13.50
17	Boxes	Mak-Ur-On Tabs.....	1.613	27.42
14	Dozen	No. 2 Pencils.....	.28	3.92
105	Pads	Yellow cross section paper.....	.177	18.59
470	Pads	Dietzgen No. 375 Cross section paper.....	.39	183.30
500	Sheets	Inventory book paper.....	.05	25.00
100	Sheets	Summary book paper.....	.0418	4.18
2	Pads	Wilson-Jones Columnar Pads No. 7025.....	1.00	2.00
150	Each	Pen Points.....	.008	1.20
20	Each	Pen Stiffs.....	.029	.58
30	Pads	Requisition on Purchasing Agent.....	.1103	3.31
875	Each	Karlton Klasp Envelopes 10x13 inches.....	.011	9.63
3,700	Each	Time Sheets.....	.00135	5.00
22,500	Each	Time Tickets.....	.0004	9.00
53	Rolls—50 Yds.	36 Inch Economy Paper.....	3.00	159.00
34	Rolls—24 Yds.	30 inch Tracing Cloth.....	19.35	657.90
4	Rolls—24 Yds.	36 inch Tracing Cloth.....	22.30	89.20
5	Rolls—24 Yds.	54 inch Tracing Cloth.....	42.10	210.50
6	Gallons	Frisket Cement.....	2.60	15.60
2	Gallons	Wall paper paste.....	1.25	2.50
[fol. 8345]				
163	Rolls—50 Yds.	50% 42 in. Blue Print paper.....	3.15	513.45
11	Rolls—50 Yds.	42 In. White Print Cloth.....	40.00	440.00
86	Rolls—50 Yds.	100% 42 in. White Print Paper.....	5.15	442.90
19	Rolls—50 Yds.	Negative Paper.....	9.00	171.00
1,350	Pads	Scratch Pads.....	.01	13.50
4	Boxes	Type Cleaner—Norta.....	.28	1.12
44	Rolls—50 Yds.	36 in. Detail Paper.....	4.48	197.12
190	Yards	Cheese Cloth.....	.0253	4.81
108	Gross	Drawing pencils.....	7.20	777.60
10	Dozen	Pencil Extenders.....	.90	9.00
48	Gross	Lettering pens—No. 170, 303, and 404.....	1.50	72.48
22	Dozen	Pen Stiffs (Lettering).....	.48	10.56

## Defendant's Exhibit No. 28—Continued

Engineering Department Supply Cost Third Year				
No. Units Used	Unit	Items	Unit Cost	Amount
42	Each	Crow Quill pen holders.....	.075	3.15
16	Gross	Crow Quill pens No. 659.....	6.75	108.00
111	Dozen	Ruby erasers.....	.33	36.63
110	Dozen	Art Gum erasers.....	.38	41.80
4	Bottles	Hyperion eradicator.....	.25	1.00
26	Rolls	Transparent mending tape.....	.0375	.97
12	Rolls	Gummed mending tape (Cloth).....	.1996	2.40
28	Dozen	Pencil Pointers.....	.90	25.20
13	Gallons	Carbon tetrachloride.....	2.00	26.00
2,100	Each	File back—8.5x11 inches.....	.0044	8.24
1	Set (12)	Show card colors.....	4.00	4.00
6	Each	Show card color brushes.....	.30	1.80
24	Bottles	Mucilage.....	.375	9.00
200	Boxes	Thumb Tacks.....	.4096	81.92
12	Tubes	Water colors.....	.15	1.80
4	Each	Water color brushes.....	.30	1.20
11	Each	Drawing Ink—Black.....	7.50	82.50
3	Bottles	Drawing Ink—Blue.....	6.00	18.00
3	Bottles	Drawing Ink—Red.....	6.00	18.00
6	Bottles	Drawing Ink—Yellow.....	6.00	36.00
3	Bottles	Drawing Ink—Orange.....	6.00	18.00
2	Bottles	Drawing Ink—Green.....	6.00	12.00
38	Cans	Tracing powder.....	.225	8.55
4	Balls	Heavy White Twine.....	.1123	.45
80	Dozen	Colored pencils.....	.52	41.60
1	Box-100	No. 6 Brad fasteners.....	.44	.44
4	Boxes-100	No. 1 Brad fasteners.....	.07	.28
4	Boxes-100	No. 2 Brad fasteners.....	.08	.32
4	Boxes-100	Gummed reinforcements.....	.04	.16
4	Jars	Opague.....	.50	2.00
2,850	Blotters	Each.....	.0025	7.12
4	Jars	Cico Paste.....	.2736	1.09
10	Rolls	Photostat Paper.....	19.30	193.00
68	Dozen	Blueprint Arc Carbons.....	.84	47.12
60	Pounds	Potassium Bichromate.....	.45	27.00
12	Pounds	Negative Hypo.....	.40	4.80
[fol. 8346]				
255	Boxes	Photostat Hypo.....	.2125	\$54.19
128	Boxes	Photostat Developer—Large..	.6804	87.09
12	Each	Blueprint lamp globes.....	1.00	12.00
6	Each	Blueprint dash pots.....	2.50	15.00
6	Each	Blueprint carbon holders upper	.25	1.50
6	Each	Blueprint carbon holders lower.	.25	1.50
4	Each	Mercury Vapor lamps.....	13.50	54.00
13,000	Sheets	Lefax paper—Transit.....	.0046	59.80
3,000	Sheets	Lefax economy paper.....	.0012	3.60
8	Gross	Pencil tip erasers.....	1.07	8.56
66	Pads-100	Daily progress reports.....	.0781	5.15
30	Pads-100	Draft Receipts.....	.625	18.75
30	Pads-100.	Draft Report Blanks.....	.0839	2.52
30	Each	Draft Books (100 Drafts).....	.4375	13.13
250	Each	Accident report blanks.....	.0064	1.60
180	Each	Automobile Reports.....	.0724	13.03
90	Each	Local Supply Order books....	.1089	9.80
200	Each	Expense account blanks post- age.....		45.00
180	Each	Blue lumber crayon.....	.07	12.60
Total.....				\$5,943.98
51% for General Engineering Cost.....				\$3,031.43
49% for Reproduction Cost of Final Engineering Records.....				2,912.55

Defendant's Exhibit No. 28—Continued

[fol. 8347]

Third Year Surveying Equipment

No.	Item	Initial Cost Each	Initial Value and Depreciation	Depreciation 3rd Year	Additional Investment Third Year
4	Transits complete with tripods and cases.	\$420.70	\$1,682.80 at 25%	\$420.70	
5	Transits complete with tripods and cases.	420.70	2,103.50 at 20%	420.70	
6	Transits complete with tripods and cases.	420.70	2,524.20 at 15%	378.63	
2	Wye levels complete with tripods.	215.00	430.00 at 15%	64.50	
21	Steel tapes, 200 ft.	9.45	198.45 at 100%	198.45	
9	Steel tapes, 100 ft.	5.40	48.60 at 100%	48.60	
30	Range poles, 8 ft. long, jointed.	3.24	97.20 at 100%	97.20	
2	Levelling rods—13 feet long, adjustable.	14.40	28.80 at 50%	14.40	
30	Sets chaining pins—12 inches long.	1.80	54.00 at 100%	54.00	
18	Machetes—22 inches long in case.	3.24	58.32 at 50%	29.16	
2	Binoculars—32 power in case.	22.95	45.90 at 15%	6.89	
12	Axes—Double bit.	1.94	23.28 at 100%	23.28	
21	Axes—Pole.	1.56	32.76 at 100%	32.76	
30	Thermos jugs—2 gallon capacity.	4.90	147.00 at 100%	147.00	
40	Loose leaf covers—Canvas back.	.94	37.60 at 50%	18.80	
27	Loose leaf covers—Canvas back.	.94	25.38 at 50%	12.69	
8	Brief Cases—Engineer's large.	15.50	124.00 at 20%	24.80	
4	Brief Cases—Engineer's large.	15.50	62.00 at 25%	15.50	
9	Brief Cases—Engineer's large.	15.50	139.50 at 15%	20.93	
22	First Aid Kits.	3.27	71.94 at 100%	71.94	
9	Protractors—6 in. Semi-circle.	.45	4.05 at 50%	2.03	
6	Protractors—6 in. Semi-circle.	.45	2.70 at 50%	1.35	
9	Engineer's scales—6 in. in case.	1.85	16.65 at 30%	4.99	
9	Engineer's Scales—6 in. in case.	1.85	16.65 at 25%	4.16	
4	Engineer's Scales—6 in. in case.	1.85	7.40 at 35%	2.59	
13	Loose leaf folders—canvas back for 8.5x11 in. sheets.	.88	11.44 at 50%	5.72	
9	Loose leaf folders—canvas back for 8.5x11 in. sheets.	.88	7.04 at 50%	3.52	
					7.04

## Defendant's Exhibit No. 28—Continued

[fol. 8348]

## Third Year Surveying Equipment—Continued

No.	Item	Initial Cost Each	Initial Value and Depreciation	Deprecia- tion 3rd Year	Additional Investment Third Year
6	Surveyors Handbooks.....	2.50	15.00 at 20%	3.00	.....
3	Surveyors Handbooks.....	2.50	7.50 at 25%	1.87	.....
6	Surveyors Handbooks.....	2.50	15.00 at 15%	2.25	.....
6	Surveyors Drawing Kits.....	1.25	7.50 at 20%	1.50	.....
3	Surveyors Drawing Kits.....	1.25	3.75 at 25%	.93	.....
6	Surveyors Drawing Kits.....	1.25	7.50 at 15%	1.13	.....
3	Brunton Pocket Compasses in case.....	28.50	85.50 at 15%	12.83	.....
2	Brunton Pocket Compasses in case.....	28.50	57.00 at 20%	11.40	.....
1	Brunton Pocket Compass in case.....	28.50	28.50 at 25%	7.12	.....
6	Thermos jugs—1 gallon capacity.....	2.95	17.70 at 100%	17.70	17.70
61	Rules—6 foot long Zig Zag.....	.45*	27.45 at 100%	27.45	27.45
18	Steel tapes—50 feet long—on reel—in leather case.....	5.40	97.20 at 100%	97.20	97.20
6	Prodding rods.....	2.50	15.00 at 35%	5.25	.....
12	Prodding rods.....	2.50	30.00 at 25%	7.50	.....
6	Drain spades.....	1.15	6.90 at 35%	2.41	.....
12	Drain spades.....	1.15	13.80 at 25%	3.45	.....
Totals.....			\$8,484.29	\$2,328.28	\$879.50
36% for General Engineering Cost.....					\$838.18
64% for Reproduction Cost of Final Engineering Records.....					1,490.10

## Defendant's Exhibit No. 28—Continued

[fol. 8349]

## Third Year Blueprinting—Preliminary

## Quantities in Square Feet

	Blue Prints	White Prints	Cloth Prints	Nega- tives
Alignment sheets.....	17,844	0	0	0
City gate measuring stations.....	13,680	0	0	0
Main line measuring and regulating stations.....	1,800	0	0	0
Railroad and highway crossings.....	653	0	0	0
River crossings.....	205	0	0	0
Standard drawings.....	8,078	0	0	0
County Maps.....	0	2,748	597	458
System Maps.....	0	8,143	0	2,979
Totals.....	<u>42,260</u>	<u>10,891</u>	<u>597</u>	<u>3,437</u>

## Final

	Blue Prints	White Prints	Cloth Prints	Nega- tives
Alignment sheets.....	8,328	0	0	0
City Gate Stations.....	5,863	0	0	0
Main Line Measuring and regulating sta- tions, etc.....	900	0	0	0
River Crossings.....	102	0	0	0
County Maps.....	0	7,079	1,185	1,185
Co-operative Maps.....	0	2,038	314	314
Sectional maps.....	0	4,766	733	733
System maps.....	0	5,099	0	2,879
Field maps.....	0	6,650	1,267	1,267
Totals.....	<u>15,193</u>	<u>25,632</u>	<u>3,499</u>	<u>6,378</u>

[fol. 8350]

## Third Year Photostating

## Full Sheets

	Preliminary	Final
Land and Legal Department.....	218	0
Accounting Department.....	816	150
Treasury Department.....	100	80
Engineering Department.....	300	0
Statistical Department.....	300	300
Operating Department.....	100	100
Safety Department.....	50	0
Geological Department.....	150	50
Executive Department.....	75	75
Industrial Department.....	75	0
Stargas Department.....	125	0
Total.....	<u>2,309</u>	<u>755</u>



## Defendant's Exhibit No. 28—Continued

## [fol. 8351] Floor Space Requirements

Personnel	Number	Square Feet Each	Total
Chief Engineer .....	1	323	323
Secretary of Chief Engineer .....	1	209	209
Office Engineer .....	1	228	228
Statistical Engineer .....	1	200	200
Computers .....	3	90	270
Inventory men .....	2	90	180
Stenographers .....	3	60	180
Field Engineers .....	3	60	180
Designing Engineer .....	1	200	200
Designers .....	3	80	240
Chief Draftsman .....	1	200	200
Assistant Chief Draftsmen .....	3	80	240
Draftsmen .....	48	60	2,880
File Room .....	1	329	329
Blueprint and Photostat Room .....	1	418	418
Engineering Supply Room .....	1	52	52
Blueprint Supply Room .....	1	28	28
Map Room .....	1	323	323
Total Square Feet .....			6,680

## [fol. 8352] Fourth Year Engineering

## [fol. 8353] Traveling Expenses and Payroll for Fourth Year of Engineering

## General Engineering Cost

Chief Engineer .....	\$12,000.00
Secretary of Chief Engineer .....	2,100.00
Car Cost—1 at \$2,100.00 .....	2,100.00
Expenses—1 man at \$1,500.00 .....	1,500.00
Total .....	\$17,700.00

## Defendant's Exhibit No. 28—Continued

[fol. 8354] Traveling Expenses and Payroll for Fourth Year of Engineering

## Reproduction Cost of Final Engineering Records

Office Engineer.....		\$4,800.00
Statistical Engineer.....	\$3,600.00	
Inventory man .24 year at.....	\$2,040.00	489.60
Stenographer .63 year at.....	1,500.00	945.00
		<u>5,034.60</u>
Field Engineers 1.95 at.....	3,300.00	6,435.00
Chief Draftsman.....	3,600.00	
Ass't Chief Draftsman (Head of Group).....	3,300.00	
Ass't Chief Draftsman .05 year at.....	3,000.00	150.00
Draftsmen 15.81 at.....	2,040.00	32,252.40
File Clerk (Head of Group).....		1,800.00
File Clerk .05 year at.....	1,500.00	75.00
Photostat operator.....		1,920.00
Blueprint operator.....		1,920.00
		<u>45,017.40</u>
Car Cost—1.95 at.....	2,100.00	4,095.00
Expenses—1.95 men at.....	1,500.00	2,925.00
Total.....		<u>\$68,307.00</u>

[fol. 8355] Engineering Personnel Required for Fourth Year of Engineering

## General Engineering Costs

Chief Engineer.....	Entire Year
Secretary of Chief Engineer.....	Entire Year

[fol. 8356] Engineering Personnel Required for Fourth Year of Engineering

## Reproduction Cost of Final Engineering Records

Office Engineer.....	Entire Year
Statistical Engineer.....	Entire Year
Inventory men as shown in detail (Final third year).....	458 Hours
Plus 10% Omissions and Contingencies.....	46
Total.....	<u>504 Hours</u>
504 divided by 2118 = .24 Inventory men Years	
Stenographers as shown in detail (Final Third Year).....	1,218 Hours
Plus 10% Omissions and Contingencies.....	122
Total.....	<u>1,340 Hours</u>
1,340 divided by 2118 = .63 Stenographer Years	

2158

## Defendant's Exhibit No. 28—Continued

## Field Engineers:

Survey party days shown in detail (Final third year).....	1,426 Days
1,428 divided by 3 = 476 Field Engineer Days	
476 divided by 244 = 1.95 Field Engineer Years	
Chief Draftsman.....	Entire Year
Ass't Chief Draftsmen—1 for each 15 draftsmen	
15.81 divided by 15 = 1.05 Assistant Chief Draftsmen Years	
Draftsmen as shown in detail (Final third year)...	30,449 Hours
Plus 10% Omissions and Contingencies.....	3,045
Total.....	33,494 Hours
33,494 divided by 2118 = 15.81 Draftsmen Years	
File Clerks—1 for each 15 Draftsmen	
15.81 divided by 15 = 1.05 File Clerk Years	
Photostat Operator.....	Entire Year
Blueprint Operator.....	Entire Year

[fol. 8357] General Expense

[fol. 8358] Summary

## General Engineering Costs

Item	Amount
Office Equipment *	\$83.93
Office Supplies	37.86
Telephones	158.40
Total	\$280.19

\* Depreciation Only.

[fol. 8359] General Expense

## Summary

## Reproduction Cost of Final Engineering Records

Item	Amount
Office Equipment *	\$3,614.71
Office and Field Supplies	3,227.60
Surveying Equipment Cost*	894.40
Telephones	396.00
Toll Charges	1,077.00
Telephones	180.00
Total	\$9,389.71

\* Depreciation and Loss on Disposition.

## Defendant's Exhibit No. 28—Continued

[fol. 8360]

## Fourth Year Details

[fol. 8361] Engineering Department Office Equipment Cost—Fourth Year

No. In Use	Item	Total Value Each	Total Value and Depreciation	Amount Charged to Fourth Year
1	Golden oak desk—glass top 60x36 inches.....	\$79.10	\$79.10 at 8%	\$6.33
1	Golden oak table—glass top 72x36 inches.....	58.50	58.50 at 8%	4.68
3	Golden oak swivel arm chairs—leather seat.....	22.00	66.00 at 8%	5.28
11	Golden oak arm chairs—straight.....	11.85	130.35 at 8%	10.43
4	Golden oak—4 Section Book cases—with top and base...	43.90	175.60 at 8%	14.05
1	Golden oak telephone table...	10.80	10.80 at 8%	.86
10	Golden oak costumer.....	7.40	74.00 at 8%	5.92
5	Golden oak globe letter trays single.....	1.60	8.00 at 8%	.64
1	Rug—14x16 foot.....	212.50	212.50 at 8%	17.00
2	Smoking stands.....	6.34	12.68 at 8%	1.01
2	Sheaffer double fountain pen desk set.....	20.00	40.00 at 8%	3.20
7	Golden oak system map frames	12.40	87.50 at 8%	7.00
2	Thermos bottles with tray and glasses.....	11.40	22.80 at 8%	1.82
20	Steel mesh waste baskets.....	.90	18.00 at 15%	2.70
2	Brass cuspidors.....	2.07	4.14 at 8%	.33
18	Enameled steel cuspidors.....	.85	15.30 at 8%	1.22
20	Rubber cuspidor mats.....	.42	8.40 at 25%	2.10
8	Staffords self-inking pads.....	.29	2.32 at 25%	.58
	Rubber stamps.....		38.25 at 20%	7.65
2	Bostich staple machines—Exec. Type.....	7.50	15.00 at 8%	1.20
17	Autopoint Bakelite pencils....	.40	6.80 at 8%	.54
6	Engineers scales—12 inches...	3.42	19.44 at 8%	1.56
5	Architects scales—12 inches...	3.24	16.20 at 8%	1.30
3	Polyphase Duplex slide rules 10 inches—in case.....	8.42	25.26 at 8%	2.02
2	Golden oak typewriter desks—60x34 inches.....	54.60	109.20 at 8%	8.74
2	Adjustable steel chairs—leather back and seat.....	17.43	34.86 at 8%	2.79
1	Golden oak settee—48 in.....	42.00	42.00 at 8%	3.36
15	Berloy steel filing cabinets....	27.30	409.50 at 8%	32.76
2	Royal Standard typewriters...	83.03	166.06 at 8%	13.28
2	Remington Line-A-Times.....	21.00	42.00 at 8%	3.36
2	Globe letter trays—double....	4.00	8.00 at 8%	.64
3	Sheaffers single fountain pen desk set.....	12.00	36.00 at 8%	2.88
1	Rug—18x14 feet.....	132.00	132.00 at 8%	10.56
2	Secretary's handbooks.....	3.50	7.00 at 8%	.56
2	Dictionaries.....	5.00	10.00 at 8%	.80
11	Bostich staple machines—Standard.....	3.02	33.22 at 8%	2.66
2	Card index cases.....	.60	1.20 at 8%	.10
1	Desk blotter holder.....	5.50	5.50 at 8%	.44
60	Sets alphabetical indexes for files.....	.95	57.00 at 25%	19.25

[fol. 8362]

## Defendant's Exhibit No. 28—Continued

## Engineering Department Office Equipment Cost—Fourth Year—Continued

No. In Use	Item	Total Value Each	Total Value and Depreciation	Amount Charged to Fourth Year
4	Dexeter pencil Sharpeners . . .	3.93	15.72 at 8%	1.26
1	Golden oak desk with glass top —66x36 inches . . . . .	84.00	84.00 at 8%	6.72
1	Golden oak table with glass top —72x34 inches . . . . .	58.00	58.00 at 8%	4.64
1	Rug—12x14 foot . . . . .	158.70	158.70 at 8%	12.70
6	Golden oak desks—60x34 in. . .	54.60	327.60 at 8%	26.21
6	Golden oak swivel chairs— leather seats . . . . .	18.50	111.00 at 8%	8.88
2	Golden oak tables—60x34 in. . .	30.80	61.60 at 8%	4.93
3	Golden oak chairs . . . . .	7.50	22.50 at 8%	1.80
1	Planimeter . . . . .	45.00	45.00 at 8%	3.60
1	Marchant Electric Calculator . .	425.00	425.00 at 8%	34.00
2	Walraven Extension Binder No. L-5840 . . . . .	7.20	14.40 at 8%	1.15
1	Walraven Extension Binder No. L-5888 . . . . .	8.44	8.44 at 8%	.67
4	Vance K Miller Binders No. 541-A . . . . .	1.25	5.00 at 8%	.40
1	Underwood typewriter—26 inch carriage . . . . .	137.70	137.70 at 8%	11.02
1	Golden oak table 72x34 in. . . .	35.00	35.00 at 8%	2.80
4	Tee Squares — Adjustable heads—42 inches . . . . .	5.93	23.76 at 8%	1.90
4	45 degree Triangles—18 in. . . .	4.41	17.64 at 8%	1.41
4	30-60 Triangles—18 in. . . . .	3.06	12.24 at 8%	.98
	Steel shelving . . . . .		152.25 at 8%	12.18
19	Drafting tables—60x34 inches with drawers . . . . .	26.25	498.75 at 8%	39.90
19	Adjustable wooden drafting stools . . . . .	12.92	245.48 at 8%	19.64
15	Tee Squares—42 inches . . . . .	2.86	42.90 at 8%	3.43
1	Globe Wernicke filing cabinet No. 7310-C . . . . .	1.20	1.20 at 8%	.10
2	Beam compasses—in case . . . . .	12.25	24.50 at 8%	1.96
3	Sets proportional dividers . . . .	12.50	37.50 at 8%	3.00
1	Sets Wrico lettering guides . . . .	35.00	35.00 at 8%	2.80
4	Steel straight edges—48 in. . . .	7.56	30.24 at 8%	2.42
4	Vernier protractors . . . . .	9.00	36.00 at 8%	2.88
1	Golden oak table—88x30 inches . . . . .	48.50	48.50 at 8%	3.88
2	Hamilton file drawer bases 32x42 inches . . . . .	6.00	12.00 at 8%	.96
13	Hamilton 5 drawer files . . . . .	28.50	370. at 8%	29.64
3	Hamilton File drawer tops . . . .	6.00	18.00 at 8%	1.44
1	Hamilton File drawer . . . . .	18.70	18.70 at 8%	1.50
1	Hamilton 1 file drawer . . . . .	12.00	12.00 at 8%	.96
1	Vertical steel map file . . . . .	300.00	300.00 at 8%	24.00
[fol. 8363]				
1	Steel supply cabinet . . . . .	32.00	32.00 at 8%	2.56
2	Pigeon hole horizontal map files . . . . .	65.00	130.00 at 8%	10.40
1	Steel mesh waste basket—30 inches high . . . . .	3.15	3.15 at 15%	.47
7	File cases for scout tickets— double . . . . .	10.00	70.00 at 8%	5.60
4	Scissors—14 inches . . . . .	3.75	15.00 at 20%	3.00

## Defendant's Exhibit No. 28—Continued

## Engineering Department Office Equipment Cost—Fourth Year—Continued

No. In Use	Item	Total Value Each	Total Value and Depreciation	Amount Charged to Fourth Year
2	Step ladders—3 feet high.....	2.00	4.00 at 8%	.32
10	Oil cans with spouts—for cleaning fluid.....	.25	2.50 at 20%	.50
1	Pease Blueprint Machine—54 inches.....	1,716.00	1,716.00 at 8%	137.28
1	Photostat machine—18x22 inches.....	1,188.00	1,188.00 at 8%	95.04
1	Paragon Blueprint dryer.....	759.00	759.00 at 8%	60.72
1	Pako Photo Dryer.....	176.00	176.00 at 8%	14.08
2	Cooper-Hewitt Mercury tube lights.....	80.00	160.00 at 8%	12.80
1	Photostat washer.....	82.50	82.50 at 8%	6.60
1	Blueprint washer—54 in.....	68.00	68.00 at 8%	5.44
1	Drying rack for negatives.....	41.80	41.80 at 8%	3.34
1	Blueprint table—45x66 inches.....	38.50	38.50 at 8%	3.08
1	Table—32x60 inches for dryer.....	3.85	3.85 at 8%	.31
1	Straight oak chair.....	5.00	5.00 at 8%	.40
1	G. I. Waste paper can.....	2.50	2.50 at 20%	.50
1	Blueprint paper can—8x55 in.....	5.00	5.00 at 8%	.40
1	Photo trimmer—Eastman—18x18 inches.....	35.00	35.00 at 8%	2.80
2	Loose leaf folders.....	.88	1.76 at 25%	.44
1	Piece plate glass—24x30 inches—Gr. edge.....	4.50	4.50 at 25%	1.13
4	Golden oak map cases.....	1,309.00	5,236.00 at 8%	418.88
1	No. 60 Marvel punch.....	1.65	1.65 at 8%	.13
1	Improved Hummer punch—4 heads.....	9.90	9.90 at 8%	.79
	Technical Reference books.....	382.50	382.50 at 8%	30.60
		<u>\$15,861.41</u>		<u>\$1,294.97</u>
	Loss on disposition of equipment.....			2,403.67
	Totals.....	<u>\$15,861.41</u>		<u>\$3,698.64</u>
	General Engineering Cost.....			\$83.93
	Reproduction Cost of Final Engineering Records.....			3,614.71

[fol. 8364]

## Engineering Department Supply Cost

No. Units Used	Units	Items	Unit Cost	Amount
110	Boxes	Gem clips.....	\$.02	\$2.20
12	Pounds	Rubber bands.....	.40	4.80
36	Boxes	Autopoint pencil leads.....	.26	9.36
11	Boxes	Bank pins.....	.36	3.96
4	Quarts	Blue-black fountain pen ink....	.90	3.60
1	Quart	Red Fountain pen ink.....	1.20	1.20
5	Each	Memorandum and date pads..	.50	2.50
18	Boxes	Bostich staples.....	1.28	23.04
375	Each	Autopoint pencil erasers.....	.0087	3.26
200	Each	Fiberstock Pockets No. 1514-C	.136	27.20
8	Boxes	Carbon paper.....	1.80	14.40
1,950	Each	Letterheads—printed.....	.0035	6.83
2,950	Each	Yellow copy sheets.....	.0004	1.18



## Defendant's Exhibit No. 28—Continued

## Engineering Department Supply Cost—Continued

No. Units Used		Fourth Year		Unit Cost	Amount
	Units	Items			
2,575	Each	Thin copy sheets.....	.0009	2.32	
1,250	Each	Interoffice letterheads.....	.0008	1.00	
250	Each	Interoffice envelopes.....	.005	1.25	
1,000	Each	Letterheads—plain.....	.0028	2.80	
3,300	Each	Small envelopes—stamped....	.0322	106.26	
1,500	Each	Large envelopes—stamped....	.0329	49.35	
12	Each	Typewriter ribbons.....	.46	5.52	
8	Each	Typewriter erasers.....	.06	.48	
2	Boxes	Type cleaner—Norta.....	.28	.56	
600	Each	Manila folders.....	.0135	8.10	
9	Boxes	Mak-Ur-On Tabs.....	1.613	14.52	
4	Dozen	No. 2 pencils.....	.28	1.12	
8	Pads	Yellow cross section paper....	.177	1.42	
150	Pads	Dietzgen No. 375 cross-section paper.....	.39	58.50	
500	Sheets	Inventory book paper.....	.05	25.00	
100	Sheets	Summary Book paper.....	.0418	4.18	
1	Pad	Wilson-Jones columnar pads No. 7025.....	1.00	1.00	
100	Each	Pen points.....	.008	.80	
10	Each	Pen staffs.....	.029	.29	
4	Pads	Requisition on Purchasing Agent.....	.1103	.44	
450	Each	Karlton Klasp Envelopes 10x13 inches.....	.011	4.95	
1,700	Each	Time sheets.....	.00135	2.30	
10,000	Each	Time tickets.....	.0004	4.00	
22	Rolls—50 Yds.	36 in. Economy paper.....	3.00	66.00	
23	Rolls—24 Yds.	30 in. Tracing cloth.....	19.35	445.05	
11	Rolls—24 Yds.	36 in. Tracing cloth.....	22.30	245.30	
1	Roll—24 Yd.	54 in. Tracing cloth.....	42.10	42.10	
14	Gallons	Frisket Cement.....	2.60	36.40	
10	Gallons	Wall paper paste.....	1.25	12.50	
[fol. 8365]					
31	Rolls—50 Yds.	50% 42 in. Blueprint paper....	3.15	97.65	
9	Rolls—50 Yds.	42 in. White print Cloth.....	40.00	360.00	
66	Rolls—50 Yds.	42 in. 100% White print paper.	5.15	339.90	
16	Rolls—50 Yds.	Negative paper.....	9.00	144.00	
576	Pads	Scratch paper.....	.01	5.76	
15	Rolls—50 Yds.	36 in. Detail paper.....	4.48	67.20	
144	Yards	Cheese cloth.....	.0253	3.64	
37	Gross	Drawing pencils.....	7.20	266.40	
4	Dozen	Pencil extenders.....	.90	3.60	
21	Gross	Lettering pens—No. 170, 303, and 404.....	1.51	31.71	
8	Dozen	Pen staffs (Lettering).....	.48	3.84	
16	Each	Crow Quill pen holders.....	.075	1.20	
7	Gross	Crow Quill pens No. 659.....	6.75	47.25	
40	Dozen	Ruby erasers.....	.33	13.20	
39	Dozen	Art gum erasers.....	.38	14.82	
2	Bottles	Hyperion eradicator.....	.25	.50	
12	Rolls	Transparent mending tape....	.0375	.45	
4	Rolls	Gummed cloth mending tape..	.1996	.80	
10	Dozen	Pencil pointers.....	.90	9.00	
6	Gallons	Carbon tetrachloride.....	2.00	12.00	
1,000	Each	File backs—8.5x11 in.....	.0044	4.40	
1	Set (12)	Show Card colors.....	3.00	3.00	

## Defendant's Exhibit No. 28—Continued

## Engineering Department Supply Cost—Continued

No. Units Used	Units	Items	Unit Cost	Amount
3	Each	Show card color brushes.....	.30	.90
12	Bottles	Mucilage.....	.375	4.50
68	Boxes (100)	Thumb tacks.....	.4096	27.85
4	Bottles	Drawing ink—Black.....	7.50	30.00
1	Bottle	Drawing ink—Blue.....	6.00	6.00
1	Bottle	Drawing ink—Red.....	6.00	6.00
3	Bottles	Drawing ink—Yellow.....	6.00	18.00
2	Bottles	Drawing ink—Orange.....	6.00	12.00
1	Bottle	Drawing ink—Green.....	6.00	6.00
18	Cans	Tracing powder.....	.225	4.05
4	Balls	Heavy white twine.....	.1123	.45
24	Dozen	Colored pencils.....	.52	12.48
1	Boxes (100)	No. 6 Brad fasteners.....	.44	.44
2	Boxes (100)	No. 1 Brad fasteners.....	.07	.14
2	Boxes (100)	No. 2 Brad fasteners.....	.08	.16
2	Boxes (100)	Gummed reinforcements.....	.04	.08
4	Jars	Opague.....	.50	2.00
900	Each	Blotters.....	.0025	2.25
2	Jars	Cico Paste.....	.02736	.55
3	Rolls	Photostat paper.....	19.30	57.90
58	Dozen	Blueprint arc carbons.....	.84	48.72
55	Pounds	Potassium Bichromate.....	.45	24.75
12	Pounds	Negative Hypo.....	.40	4.80
255	Boxes	Photostat Hypo.....	.2125	54.19
128	Boxes	Photostat developer—large.....	.6804	87.09
6	Each	Blueprint lamp globes.....	1.00	6.00
1	Each	Paragon Dryer belt.....	60.00	60.00
[fol. 8366]				
1	Each	Pako dryer belt.....	19.29	60.00
4	Each	Mercury vapor lamps.....	13.50	54.00
6,400	Sheets	Lefax paper—Transit.....	.0046	29.44
1,400	Sheets	Lefax paper—Economy.....	.0012	1.68
3	Gross	Pencil tip erasers.....	1.07	3.21
26	Pads—100	Daily Progress Reports.....	.0781	2.03
12	Pads—100	Draft Receipts.....	.625	7.50
12	Pads—100	Draft Report blanks.....	.0839	1.00
12	Each	Draft books (100 drafts).....	.4375	5.25
100	Each	Accident report blanks.....	.0064	.64
72	Each	Automobile reports.....	.0724	5.21
36	Each	Local supply order books.....	.1089	3.92
100	Each	Expense account blanks.....	.005936	.59
		Postage.....		20.00
72	Each	Blue lumber crayon.....	.07	5.04
Total.....				\$3,265.46
General Engineering Cost.....				\$37.86
Reproduction Cost of Final Engineering Records.....				3,227.60

## Defendant's Exhibit No. 28—Continued

[fol. 8367]

## Reproduction Cost of Final Engineering Records

## Fourth Year Surveying Equipment Cost

No.	Item	Initial Cost Each	Initial Value and Depreciation	Deprecia- tion 4th Year	Additional Investment Fourth Year
6	Transits complete with tripods and cases.	\$420.70	\$2,524.20 at 15%	\$378.63	
2	Wye levels complete with tripods and cases.	215.00	430.00 at 15%	64.50	
6	Steel tapes, 200 ft.	9.45	56.70 at 100%	56.70	\$56.70
6	Steel tapes, 100 ft.	5.40	32.40 at 100%	32.40	32.40
12	Range poles—8 ft.	3.24	38.88 at 100%	38.88	38.88
12	Leveling rods 13 ft.	14.40	28.80 at 50%	14.40	
12	Sets chaining pins 12 inches long.	1.80	21.60 at 100%	21.60	21.60
6	Machets—22 inches long in case.	3.24	19.44 at 50%	9.72	19.44
2	Binoculars—32 power—in leather case.	22.95	45.90 at 15%	6.89	
6	Axes—Double bit.	1.94	11.64 at 100%	11.64	11.64
6	Axes—Pole.	1.56	9.36 at 100%	9.36	9.36
12	Thermos jugs—2 gallon capacity.	4.90	58.80 at 100%	58.80	58.80
27	Loose leaf covers—Canvas back.	.94	25.38 at 50%	12.69	
9	Brief cases—Engineer's large.	15.50	139.50 at 15%	20.93	
9	First aid kits.	3.27	29.43 at 100%	29.43	29.43
6	Protractors—6 inch Semi-circle.	.45	2.70 at 50%	1.35	
9	Engineer's Scales—6 inches in case.	1.85	16.65 at 25%	4.16	
9	Loose leaf folders—Canvas back.	.88	7.92 at 50%	3.96	
6	Surveyor's Handbooks.	2.50	15.00 at 15%	2.25	
6	Surveyor's Drawing Kits.	1.25	7.50 at 15%	1.13	
3	Brunton Pocket Compasses in case.	28.50	85.50 at 15%	12.83	
3	Thermos jugs—1 gallon capacity.	2.95	8.85 at 100%	8.85	8.85
39	Rules—6 feet long Zig Zag.	.45	17.55 at 100%	17.55	17.55
12	Steel tapes, 50 feet long on reel, in leather case.	5.40	64.80 at 100%	64.80	64.80
12	Prodding rods.	2.50	30.00 at 25%	7.50	
12	Drain spades.	1.15	13.80 at 25%	3.45	
Totals.			\$3,742.30	\$894.40	\$369.45

## Defendant's Exhibit No. 28—Continued

[fols. 8368-8369] Floor Space Requirement		Square Feet	
Personnel	Number	Each	Total
Chief Engineer .....	1	323	323
Secretary of Chief Engineer .....	1	209	209
Office Engineer .....	1	228	228
Statistical Engineer .....	1	200	200
Inventory men .....	1	90	90
Stenographer .....	1	60	60
Field Engineers .....	1	60	60
Chief Draftsman .....	1	200	200
Assistant Chief Draftsmen .....	2	80	160
Draftsmen .....	17	60	1,040
File Room .....	1	329	329
Blueprint and Photostat Room .....	1	418	418
Engineering Supply room .....	1	52	52
Blueprint Supply room .....	1	28	28
Map room .....	1	323	323
Total Square Feet .....			3,720

## [fol. 8370] Field Engineering Costs

## Definition:

The definition and development of General Engineering Costs specifically eliminated all charges for engineering services incurred prior to the incorporation of the company, all fees for special structures, and all charges for engineering included in direct structural costs.

No engineering costs have been included in direct structural costs except those involved in fees for special structures.

Field Engineering Costs as used in this estimate of the reproduction cost of the property and business of Lone Star Gas Company are intended to include the salaries and expenses of the party chief, instrument men, rod men, chain men, bridge inspectors and their helpers who would be engaged in the necessary field work incident to the reproduction of the various units of physical property of Lone Star Gas Company as of January 1, 1933.

The field party equipment cost has been included in General Engineering Expenses.

### Survey Parties and Personnel Analysis:

The number of survey party days shown in the detail by years refers to each day's work on each project that would require a survey party consisting of one or more members.

That is, a party making a lease survey or a preliminary survey for a pipe line or telephone line would consist of a party chief, an instrument man, a flagman, a head and rear chainman, and an average of two axemen; a party making a preliminary survey for a compressor station, warehouse, camp site, or a pipe line bridge would consist of a party chief, an instrument man, a rodman, a head and [fol. 8371] rear chainman, and an average of one axeman; while the inspection of a pipe line bridge would require only one bridge inspector.

Likewise a party making a final survey of a pipe line or telephone line would consist of a party chief, an instrument man, and a head and rear chainman, while a party making a final survey of a compressor station, warehouse, camp site, or a pipe line bridge would consist of a party chief, an instrument man, a rodman, and a head and rear chainman.

The chiefs of parties would report to the field engineers. They would lay out and supervise the work of their parties, and would employ locally as many axemen as the work would require, pay them on a day basis. They would be responsible for the proper keeping of the time and expenses of their parties, and also their parties discipline, as well as the accuracy of the work of their parties.

The bridge inspectors would report to the field engineers. They would supervise the work of the bridge contractors and would decide any and all questions as to the quality or acceptability of the materials furnished and work performed, and as to the manner of performance and rate of progress of the work, and they would decide all questions which might arise as to the interpretation of the plans and specifications and to the acceptable fulfillment of the contract by the contractor. They would be authorized to approve any additional work occasioned by unfor-seen local conditions, or work necessary to complete the bridge which is not called for in the plans and specifications.

The instrumentmen would do all level and transit work and would keep sets of accurate, legible, and intelligible



[fol. 8372] notes, and they would help make sketches of equipment on the final survey. In the absence of the party chief, they would assume his responsibility. They would also be responsible for the care and upkeep of the instruments which they would use.

The rodmen would work with the instrumentmen and would be able to make correct rod readings and to understand the instrumentmen's signals, and when required to do so, would be able to keep notes for the instrumentmen. They would be responsible for the care and upkeep of the rods and other equipment they would use.

The flagmen would work with the instrumentmen and would be able to understand the instrumentmen's signals and to make proper set-up points for the instrumentmen.

The chainmen would be responsible for the accurate measurement of all distances, and the head chainman would be able to keep sets of accurate, legible, and intelligible chain notes, and they would help make sketches of equipment on the final survey.

The axemen, who would be employed locally by the party chief, would do all of the necessary clearing for the party, and also carry and drive all stakes.

[fol. 8373] First Year Field Engineering

[fol. 8374] Survey Party Salaries

Personnel	Month	Year
Chief of Party .....	\$250.00	\$3,000.00
Chief of Party .....	225.00	2,700.00
Bridge Inspector .....	200.00	2,400.00
Instrument Man .....	200.00	2,400.00
Instrument Man .....	175.00	2,100.00
Rodman—average .....	140.00	1,680.00
Flagman—average .....	140.00	1,680.00
Head Chainman—average .....	125.00	1,500.00
Rear Chainman—average .....	110.00	1,320.00
Car Cost .....	175.00	2,100.00
Expenses per man .....	106.46	1,277.50

Axemen—employed locally at \$4.00 per day.



## Defendant's Exhibit No. 28—Continued

[fol. 8375]

## First Year Engineering

## Survey Party Days According to Type of Work

## General Engineering Costs

Pipe Line and Telephone Line Survey Days—Preliminary First Year.....	1,380 Days
Gas Lease Survey Days.....	470

Total.....	1,850 Days
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Compressor Station, Warehouse, and Camp Site Survey Days—	
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Preliminary First Year.....	863 Days
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Pipe Line Bridge Survey Days—	
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Preliminary First Year.....	48
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Total.....	863 Days
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Pipe Line Bridge Inspection Days.....	300 Days
---------------------------------------	----------

[fol. 8376]

Survey Party Personnel Required for  
First Year of Engineering

## General Engineering Costs

Party Chiefs as shown in detail—1,850 plus 863.....	2,713 Days
Plus 10% Omissions and Contingencies.....	271

Total.....	2,984 Days
------------	------------

2,984 divided by 255 = 11.70 Party Chief Years

Bridge Inspectors as shown in detail—.....	300 Days
Plus 10% Omissions and Contingencies.....	30

Total.....	330 Days
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330 divided by 255 = 1.29 Bridge Inspector Years

Instrumentmen as shown in detail—1,850 plus 863...	2,713 Days
Plus 10% Omissions and Contingencies.....	271

Total.....	2,984 Days
------------	------------

2,984 divided by 255 = 11.70 Instrumentmen Years

Rodmen as shown in detail—.....	863 Days
Plus 10% Omissions and Contingencies.....	86

Total.....	949 Days
------------	----------

949 divided by 255 = 3.72 Rodmen Years

Flagmen as shown in detail—.....	1,850 Days
Plus 10% Omissions and Contingencies.....	185

Total.....	2,035 Days
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## Defendant's Exhibit No. 28—Continued

## General Engineering Costs—Continued

2,035 divided by 255 = 7.98 Flagmen Years	
Head Chainman as shown in detail—1,850 plus 863..	2,713 Days
Plus 10% Omissions and Contingencies.....	271
Total.....	2,984 Days
Rear Chainman as shown in detail—1,850 plus 863..	2,713 Days
Plus 10% Omissions and Contingencies.....	271
Total.....	2,984 Days
2,984 divided by 255 = 11.70 Rear Chainman Years	
Axemen as shown in detail (2 x 1,850) plus 863.....	4,563 Days
Plus 10% Omissions and Contingencies.....	456
Total.....	5,019 Days

## [fol. 8377] Survey Party Payroll First Year

Chief of Parties	
6.00 at \$3,000.00.....	\$18,000.00
5.70 at 2,700.00.....	15,390.00
	<u>\$33,390.00</u>
Bridge Inspectors	
1.29 to 2,400.00.....	3,096.00
Instrument Men	
6.00 at 2,400.00.....	14,400.00
5.70 at 2,100.00.....	11,970.00
	<u>26,370.00</u>
Rodmen	
3.72 at 1,680.00.....	6,249.60
Flagmen	
7.98 at 1,680.00.....	13,406.40
Head Chainmen	
11.70 at 1,500.00.....	17,550.00
Rear Chainmen	
11.70 at 1,320.00.....	15,444.00
Car Cost	
12.99 at 2,100.00.....	27,279.00
Expenses	
59.79 at 1,277.50.....	76,381.72
Axemen	
5,019 Days at \$4.00.....	20,076.00
Total.....	<u><u>\$239,242.72</u></u>

## Defendant's Exhibit No. 28—Continued

[fol. 8378] Second Year Field Engineering

[fol. 8379] Second Year Engineering

## Survey Party Days According to Type of Work

## General Engineering Costs

Pipe Line and Telephone Line Survey Party Days—Preliminary—Second Year.....	1,006 Days
Gas Lease Survey Days—Second Year.....	290

Total.....	1,296 Days
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Compressor Station, Warehouse, Camp Site Survey Days, Preliminary Second Year.....	625 Days
Pipe Line Bridge Survey Days, Preliminary Second Year.....	50

Total.....	675 Days
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Pipe Line Bridge Inspection Days.....	270 Days
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[fol. 8380] Second Year Engineering

## Survey Party Days According to Type of Work

## Reproduction Cost of Final Engineering Records

Pipe Line and Telephone Line Survey Days—Final First Year.....	1,687 Days
Compressor Station, Warehouse, Camp Site, and Pipe Line Bridge Survey Days—Final First Year..	1,123

Total.....	2,810 Days
------------	------------

[fol. 8381] Survey Party Personnel Required for Second Year of Engineering

## General Engineering Costs

## Party Chiefs as shown in detail—

Preliminary Second Year—1,296 plus 675.....	1,971 Days
Plus 10% Omissions and Contingencies.....	197

Total.....	2,168 Days
------------	------------

2,168 divided by 244 = 8.89 Party Chief Years

Bridge Inspectors, as shown in detail.....	270 Days
Plus 10% Omissions and Contingencies.....	27

Total.....	297 Days
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## Defendant's Exhibit No. 28—Continued

## General Engineering Costs—Continued

90% of 1.29 = 1.16 Bridge Inspectors will work 244 days each the Second Year

$1.16 \times 244 = 283$  Days 297 less 283 = 14 Days

14 divided by 255 = .05 Inspector will work 255 days each the Second Year

1.16 plus .05 = 1.21 Bridge Inspector Years

## Instrument Men as shown in detail—

Preliminary Second Year—1,296 plus 675.....	1,971 Days
Plus 10% Omissions and Contingencies.....	197

Total.....	2,168 Days
------------	------------

2,168 divided by 244 = 8.89 Instrument Men Years

## Rodmen as shown in detail

Preliminary Second Year.....	675 Days
Plus 10% Omissions and Contingencies.....	67

Total.....	742 Days
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742 divided by 244 = 3.04 Rodmen Years

## Flagmen as shown in detail

Preliminary Second Year.....	1,296 Days
Plus 10% Omissions and Contingencies.....	130

Total.....	1,426 Days
------------	------------

1,426 divided by 244 = 5.84 Flagmen Years

## Head Chainmen as shown in detail

Preliminary Second Year 1,296 plus 675.....	1,971 Days
Plus 10% Omissions and Contingencies.....	197

Total.....	2,168 Days
------------	------------

2,168 divided by 244 = 8.89 Head Chainmen Years

[fol. 8382]

## Rear Chainmen as shown in detail

Preliminary Second Year 1,296 plus 675.....	1,971 Days
Plus 10% Omission and Contingencies.....	197

Total.....	2,168 Days
------------	------------

2,168 divided by 244 = 8.89 Rear Chainmen Years

Axemen as shown in detail ( $2 \times 1,296$ ) plus 675.....	3,267 Days
Plus 10% Omissions and Contingencies.....	327

Total.....	3,594 Days
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## Defendant's Exhibit No. 28—Continued

[fol. 8383] Survey Party Personnel Required for  
Second Year of Engineering

## Reproduction Cost of Final Engineering Records

## Party Chiefs as shown in detail

Final First Year.....	2,810 Days
Plus 10% Omissions and Contingencies.....	281
Total.....	3,091 Days

90% of 11.70 = 10.53 Party Chiefs will work 244 days  
each the Second Year

10.53 - 8.89 (No. employed in General Eng. Cost  
Work) = 1.64

1.64 × 244 = 400 Days

3,091 - 400 = 2,691 Days

2,691 divided by 244 = 10.55 Party Chiefs will work  
255 days the Second Year

1.64 plus 10.55 = 12.19 Party Chief Years

## Instrument men as shown in detail

Final First Year.....	2,810 Days
Plus 10% Omissions and Contingencies.....	281
Total.....	3,091 Days

90% of 11.70 = 10.53 Instrument men will work 244  
days each the Second Year

10.53 - 8.89 (No. employed in General Eng. Cost  
Work) = 1.64

1.64 × 244 = 400 Days

3,091 - 400 = 2,691 Days

2,691 divided by 255 = 10.55 Instrument men will  
work 255 days each the Second Year

1.64 plus 10.55 = 12.19 Instrument Men Years

## Rodmen as shown in detail

Final First Year.....	1,123 Days
Plus 10% Omissions and Contingencies.....	112
Total.....	1,235 Days

90% of 3.72 = 3.35 Rodmen will work 244 days each  
the second Year

3.35 - 3.04 (No. employed in General Eng. Cost) = .31

.31 × 244 = .75

1,235 - .75 = 1,160 Days

1,160 divided by 255 = 4.55 Rodmen will work 255  
days each the Second Year

.31 plus 4.55 = 4.86 Rodmen Years

## Defendant's Exhibit No. 28—Continued

## Reproduction Cost of Final Engineering Records—Continued

## Head Chainmen as shown in detail

Final First Year.....	2,810 Days
Plus 10% Omissions and Contingencies.....	281
Total.....	<u>3,091 Days</u>

90% of 11.70 = 10.53 Head Chainmen will work 244 days each the Second Year

[fol. 8384]

10.53 - 889 (No. employed in General Eng. Cost)  
= 1.64  
1.64 × 244 = 400 Days  
3,091 - 400 = 2,691 Days  
2,691 divided by 255 = Head Chainman will work  
255 days each the Second Year  
1.64 plus 10.55 = 12.19 Head Chainmen Years

## Rear Chainmen as shown in detail

Final First Year.....	2,810 Days
Plus 10% Omissions and Contingencies.....	281
Total.....	<u>3,091 Days</u>

90% of 11.70 = 10.53 Rear Chainmen will work 244 days each the Second Year

10.53 - 8.89 (No. employed in General Eng. Work)  
= 1.64  
1.64 × 244 = 400 Days  
3,091 - 400 = 2,691 Days  
2,691 divided by 255 = 10.55 Rear Chainmen will  
work 255 days each the Second Year  
1.64 plus 10.55 = 12.19 Rear Chainmen Years

[fol. 8385] Survey Party Payroll Second Year

## General Engineering Costs

## Chiefs of Parties

4 at \$3,000.00.....	\$12,000.00	
4.89 at 2,700.00.....	13,203.00	
	<u></u>	\$25,203.00

## Bridge Inspectors—

1.21 at 2,400.00.....	2,904.00
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## Instrument Men

4.00 at 2,400.00.....	9,600.00	
4.89 at 2,100.00.....	10,269.00	
	<u></u>	19,869.00

## Rodmen

3.04 at 1,680.00.....	5,107.20
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## Defendant's Exhibit No. 28—Continued

## General Engineering Costs—Continued

Flagmen		
5.84 at 1,680.00 .....		9,811.20
Head Chainmen		
8.89 at 1,500.00 .....		13,335.00
Rear Chainmen		
8.89 at 1,320.00 .....		11,734.80
Car Cost		
10.10 at 2,100.00 .....		21,210.00
Expense		
45.65 at 1,277.50 .....		58,317.87
Axemen		
3,594 days at \$4.00 .....		14,376.00
Total .....		<u>\$181,868.07</u>

[fol. 8386] Survey Party Payroll Second Year

## Reproduction Cost of Final Engineering Records

Chiefs of Parties		
6.00 at \$3,000.00 .....	\$18,000.00	
6.19 at 2,700.00 .....	16,713.00	
		<u>\$34,713.00</u>
Instrument Men		
6.00 at 2,400.00 .....	14,400.00	
6.19 at 2,100.00 .....	12,999.00	
		<u>27,399.00</u>
Rodmen		
4.86 at 1,680.00 .....		8,164.80
Head Chainmen		
12.19 at 1,500.00 .....		18,285.00
Rear Chainmen		
12.19 at 1,320.00 .....		16,090.80
Car Cost		
12.19 at 2,100.00 .....		25,599.00
Expenses		
53.62 men at \$1,277.50 .....		68,499.55
Total .....		<u>\$198,751.15</u>

## Defendant's Exhibit No. 28—Continued

[fol. 8387] Third Year Field Engineering  
 [fol. 8388] Survey Party Days According to Type of Work  
     General Engineering Costs  
 Pipe Line and Telephone Line Survey Days  
     Preliminary Third Year..... 1,166 Days

[fol. 8389] Third Year Engineering  
     Survey Party Days According to Type of Work  
     Reproduction Cost of Final Engineering Records  
 Pipe Line and Telephone Line Survey Days  
     Final Second Year..... 1,191 Days  
 Compressor Station, Warehouse, Camp Site, and  
     Pipe Line Bridge Survey Days Final Second Year . 922  
     Total..... 2,113 Days

[fol. 8390] Survey Party Personnel Required for  
     Third Year of Engineering  
     General Engineering Costs  
 Party Chiefs as shown in Detail  
     Preliminary Third Year..... 1,166 Days  
     Plus 10% Omissions and Contingencies..... 117  
     Total..... 1,283 Days  
     1,283 divided by 244 = 5.26 Party Chief Years

Instrument Men as shown in detail  
     Preliminary Third Year..... 1,166 Days  
     Plus 10% Omissions and Contingencies..... 117  
     Total..... 1,283 Days  
     1,283 divided by 244 = 5.26 Instrument Men Years

Flagmen as shown in detail  
     Preliminary Third Year..... 1,166 Days  
     Plus 10% Omissions and Contingencies..... 117  
     Total..... 1,283 Days  
     1,283 divided by 244 = 5.26 Flagmen Years

Head Chainmen as shown in detail  
     Preliminary Third Year..... 1,166 Days  
     Plus 10% Omissions and Contingencies..... 117  
     Total..... 1,283 Days  
     1,283 divided by 244 = 5.26 Head Chainmen Years

## Defendant's Exhibit No. 28—Continued

## General Engineering Costs—Continued

## Rear Chainmen as shown in detail

Preliminary Third Year.....	1,166 Days
Plus 10% Omissions and Contingencies.....	117

Total.....	1,283 Days
------------	------------

1,283 divided by 244 = 5.26 Rear Chainmen Years

Axemen as shown in detail (2 × 1,166).....	2,332 Days
Plus 10% Omissions and Contingencies.....	233

Total.....	2,565 Days
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[fol. 8391] Survey Party Personnel Required for  
Third Year of Engineering

## Reproduction Cost of Final Engineering Records

## Party Chiefs as shown in detail

Final Second Year.....	2,113 Days
Plus 10% Omissions and Contingencies.....	211

Total.....	2,324 Days
------------	------------

2,324 divided by 244 = 9.52 Party Chief Years

## Instrument Men as shown in detail

Final Second Year.....	2,113 Days
Plus 10% Omissions and Contingencies.....	211

Total.....	2,324 Days
------------	------------

2,324 divided by 244 = 9.52 Instrument Men Years

## Rodmen as shown in detail

Final Second Year.....	922 Days
Plus 10% Omissions and Contingencies.....	92

Total.....	1,014 Days
------------	------------

1,014 divided by 244 = 4.16 Rodmen Years

## Head Chainmen as shown in detail

Final Second Year.....	2,113 Days
Plus 10% Omissions and Contingencies.....	211

Total.....	2,324 Days
------------	------------

2,324 divided by 244 = 9.52 Head Chainmen Years

## Rear Chainmen as shown in detail

Final Second Year.....	2,113 Days
Plus 10% Omissions and Contingencies.....	211

Total.....	2,324 Days
------------	------------

2,324 divided by 244 = — Rear Chainmen Years

## Defendant's Exhibit No. 28—Continued

[fol. 8392]

Survey Party Payroll Third Year  
General Engineering Costs

Chiefs of Parties		
3.00 at \$3,000.00.....	\$9,000.00	
2.26 at 2,700.00.....	6,102.00	
	<hr/>	\$15,102.00
Instrument Men		
3.00 at 2,400.00.....	7,200.00	
2.26 at 2,100.00.....	4,746.00	
	<hr/>	11,946.00
Flagmen		
5.26 at 1,680.00.....		8,836.80
Head Chainmen		
5.26 at 1,500.00.....		7,890.00
Rear Chainmen		
5.26 at 1,320.00.....		6,943.20
Car Cost		
5.26 at 2,100.00.....	11,046.00	
	<hr/>	11,046.00
Expenses		
26.30 men at \$1,277.50.....		33,598.25
Axemen		
2,565 days at 4.00.....		10,260.00
	<hr/>	
Total.....		<u><u>\$105,622.25</u></u>

[fol. 8393]

## Survey Party Payroll Third Year

## Reproduction Cost of Final Engineering Records

Chiefs of Parties		
5.00 at \$3,000.00.....	\$15,000.00	
4.52 at 2,700.00.....	12,204.00	
	<hr/>	\$27,204.00
Instrumentmen		
5.00 at 2,400.00.....	12,000.00	
4.52 at 2,100.00.....	9,492.00	
	<hr/>	21,492.00
Rodmen		
4.16 at 1,680.00.....		6,988.80
Head Chainmen		
9.52 at 1,500.00.....		14,280.00
Rear Chainmen		
9.52 at 1,320.00.....		12,566.40

## Defendant's Exhibit No. 28—Continued

## Reproduction Cost of Final Engineering Records—Continued

Car Cost	
9.52 at 2,100.00 .....	19,992.00
Expenses	
42.24 men at \$1,277.50 .....	53,961.60
Total .....	<u>\$156,484.80</u>

[fol. 8394] Second Year Engineering

Survey Party Days According to Type of Work

Reproduction Cost of Final Engineering Records

Pipe Line and Telephone Line Survey Days

Final Third Year ..... 1,298 Days |[fol. 8395] Survey Party Personnel Required for  
Fourth Year of Engineering

Reproduction Cost of Final Engineering Records

Party Chiefs as shown in detail

Final Third Year .....	1,298 Days
Plus 10% Omissions and Contingencies .....	130

Total .....	1,428 Days
-------------	------------

1,428 divided by 244 = 5.85 Party Chief Years

Instrumentmen as shown in detail

Final Third Year .....	1,298 Days
Plus 10% Omissions and Contingencies .....	130

Total .....	1,428 Days
-------------	------------

1,428 divided by 244 = 5.85 Instrument Men Years

Head Chainmen as shown in detail

Final Third Year .....	1,298 Days
Plus 10% Omissions and Contingencies .....	130

Total .....	1,428 Days
-------------	------------

1,428 divided by 244 = 5.85 Head Chainmen Years

Rear Chainmen as shown in detail

Final Third Year .....	1,298 Days
Plus 10% Omissions and Contingencies .....	130

Total .....	1,428 Days
-------------	------------

1,428 divided by 244 = 5.85 Rear Chainmen Years

## Defendant's Exhibit No. 28—Continued

[fol. 8396] Survey Party Payroll Fourth Year

## Reproduction Cost of Final Engineering Records—Continued

Chiefs of Parties		
3.00 at \$3,000.00	\$9,000.00	
2.85 at 2,700.00	7,695.00	
		\$16,695.00
Instrument Men		
3.00 at 2,400.00	7,200.00	
2.85 at 2,100.00	5,985.00	
		13,185.00
Head Chainmen		
5.85 at 1,500.00		8,775.00
Rear Chainmen		
5.85 at 1,320.00		7,722.00
Car Cost		
5.85 at 2,100.00		12,285.00
Expenses		
23.40 men at \$1,277.50		29,893.50
Total		<u>\$88,555.50</u>

Job No. 3104. Supreme Court Record No. —

[fol. 8397] First Year Engineering Survey Parties

## General Engineering Costs

Surveying party days as shown in detail, preliminary first year—3,314. Being the first year of work, the surveying parties will work the entire 255 days per year, therefore,

3,314 divided by 255 = 13.00 Surveying parties will be required for the first year's work.

[fol. 8398] Second Year Engineering Survey Parties

## General Engineering Costs

Surveying days as shown in detail:

Preliminary Second Year . . . . . 2,465 Days.

2,465 divided by 244 = 10.10 Survey Parties.



## Defendant's Exhibit No. 28—Continued

[fol. 8399] Second Year Engineering Survey Parties

## Reproduction Cost of Final Engineering Records

Surveying Days as shown in detail:

Final First Year ..... 3,091 Days.

90% of the parties working the First Year will also work the Second Year.

90% of 13 = 11.70 Parties.

11.70 less 10.10 (No. employed in General Eng. Cost) = 1.60.

 $1.60 \times 244 = 390$ .

3,091 less 390 = 2,701 days will be utilized by parties working 255 days.

2,701 divided by 255 = 10.59 additional parties will be required.

1.60 plus 10.59 = 12.10 Parties.

[fol. 8400] Third Year Engineering Survey Parties

## General Engineering Costs

Surveying Party days as shown in detail:

Preliminary Third Year ..... 1,283 Days.

1,283 divided by 244 = 5.26 Survey Parties.

[fol. 8401] Third Year Engineering Survey Parties

## Reproduction Cost of Final Engineering Records

Surveying Party days as shown in detail:

Final Second Year ..... 2,324 Days.

2,324 divided by 244 = 9.52 Survey Parties.

[fols. 8402-8403] Fourth Year Engineering Survey Parties

## Reproduction Cost of Final Engineering Records

Surveying Party days as shown in detail:

Final Third Year ..... 1,428 Days.

90% of the parties working the third year would also work the Fourth Year.

90% of 14.78 = 13.30 parties. These parties would work only 244 days the fourth year. They would, therefore, work

$13.30 \times 244 = 3,245$  days the Fourth Year, which is more than enough to take care of the Fourth year's work.

Hence, all surveying parties will work only 244 days during the Fourth Year. Therefore,

$1,428$  divided by  $244 = 5.85$  parties will be required for the Fourth Year's work.

[fol. 8404] General Supervision Costs

### General Summary

Salaries .....	\$255,610
Stationery and Office Supplies .....	11,936
Transportation (Cost of Operation plus Depreciation- .....	63,060
Traveling Expenses .....	46,915
Communication Expenses .....	22,834
Office Furniture and Fixtures (Depreciation Only) .....	1,638
Special Medical Equipment .....	12,500
Total .....	<u>\$414,493</u>

[fol. 8405] General Supervision Costs

### Summary of Costs

#### Pre-Construction Period

#### Salaries:

Office of General Superintendent .....	\$11,235
Division of Plant and Equipment .....	2,225
Division of Safety and Medical Examination .....	2,930
	<u>\$16,390</u>

#### Stationery and Office Supplies:

Office of General Superintendent .....	339
Division of Plant and Equipment .....	113
Division of Safety and Medical Examination .....	57
	<u>509</u>

## Defendant's Exhibit No. 28—Continued

## Transportation Expense:

Office of General Superintendent.....	1,386.	
Division of Plant and Equipment.....	678	
Division of Safety and Medical Examination .....		
	<hr/>	2,064

## Traveling Expense:

Office of General Superintendent.....	630	
Division of Plant and Equipment.....	345	
Division of Safety and Medical Examination .....	220	
	<hr/>	1,195

## Communication Expense:

Office of General Superintendent.....	1,619	
Division of Plant and Equipment.....	265	
Division of Safety and Medical Examination .....	88	
	<hr/>	1,972

Office Furniture and Fixtures—  
Depreciation Only:

Office of General Superintendent.....	132	
Division of Plant and Equipment.....	56	
Division of Safety and Medical Examination .....	46	
	<hr/>	234

Total Pre-Construction Period.....	<hr/> <hr/>	\$22,364
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## Construction Period—First Year

## Salaries:

Office of General Superintendent.....	\$27,480	
Division of Plant and Equipment.....	17,100	
Division of Safety and Medical Examination .....	35,160	
	<hr/>	\$79,740

## Defendant's Exhibit No. 28—Continued

## [fol. 8406] Stationery and Office Supplies:

Office of General Superintendent.....	\$1,180	
Division of Plant and Equipment.....	933	
Division of Safety and Medical Examination .....	1,696	
	<hr/>	\$3,809

## Transportation Expense:

Office of General Superintendent.....	2,292	
Division of Plant and Equipment.....	6,312	
Division of Safety and Medical Examination .....	11,728	
	<hr/>	20,332

## Traveling Expense:

Office of General Superintendent.....	840	
Division of Plant and Equipment.....	4,200	
Division of Safety and Medical Examination .....	10,200	
	<hr/>	15,240

## Communication Expense:

Office of General Superintendent.....	4,738	
Division of Plant and Equipment.....	1,058	
Division of Safety and Medical Examination .....	1,658	
	<hr/>	7,454

Office Furniture and Fixtures—  
Depreciation Only:

Office of General Superintendent.....	263	
Division of Plant and Equipment.....	112	
Division of Safety and Medical Examination .....	93	
	<hr/>	468

## Special Medical Equipment:

Division of Safety and Medical Examination .....	4,167	
	<hr/>	4,167

Total Construction Period—First Year ..	<hr/> <hr/>	\$131,210
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## Defendant's Exhibit No. 28—Continued

## Construction Period—Second Year

## Salaries:

Office of General Superintendent .....	\$27,480	
Division of Plant and Equipment .....	17,100	
Division of Safety and Medical Examination .....	35,160	
	<hr/>	\$79,740

## Stationery and Office Supplies:

Office of General Superintendent .....	1,180	
Division of Plant and Equipment .....	933	
Division of Safety and Medical Examination .....	1,696	
	<hr/>	3,809

## [fol. 8407] Transportation Expense:

Office of General Superintendent .....	\$2,292	
Division of Plant and Equipment .....	6,312	
Division of Safety and Medical Examination .....	11,728	
	<hr/>	\$20,332

## Traveling Expense:

Office of General Superintendent .....	840	
Division of Plant and Equipment .....	4,200	
Division of Safety and Medical Examination .....	10,200	
	<hr/>	15,240

## Communication Expense:

Office of General Superintendent .....	4,738	
Division of Plant and Equipment .....	1,058	
Division of Safety and Medical Examination .....	1,658	
	<hr/>	7,454

Office Furniture and Fixtures—  
Depreciation Only

Office of General Superintendent .....	263	
Division of Plant and Equipment .....	112	
Division of Safety and Medical Examination .....	93	
	<hr/>	468

## Defendant's Exhibit No. 28—Continued

## Special Medical Equipment:

Division of Safety and Medical Examination .....	4,167	4,167
	<hr/>	<hr/>
Total Construction Period—Second Year .....		<u>\$131,210</u>

## Construction Period—Third Year

## Salaries:

Office of General Superintendent .....	\$27,480	
Division of Plant and Equipment .....	17,100	
Division of Safety and Medical Examination .....	35,160	
	<hr/>	\$79,740

## Stationery and Office Supplies:

Office of General Superintendent .....	1,180	
Division of Plant and Equipment .....	933	
Division of Safety and Medical Examination .....	1,696	
	<hr/>	3,809

## Transportation Expense:

Office of General Superintendent .....	2,292	
Division of Plant and Equipment .....	6,312	
Division of Safety and Medical Examination .....	11,728	
	<hr/>	20,332

## [fol. 8408]. Traveling Expense:

Office of General Superintendent .....	\$840	
Division of Plant and Equipment .....	4,200	
Division of Safety and Medical Examination .....	10,200	
	<hr/>	\$15,240

## Communication Expense:

Office of General Superintendent .....	3,238	
Division of Plant and Equipment .....	1,058	
Division of Safety and Medical Examination .....	1,658	
	<hr/>	5,954



## Defendant's Exhibit No. 28—Continued

Office Furniture and Fixtures—  
Depreciation Only

Office of General Superintendent .....	263	
Division of Plant and Equipment .....	112	
Division of Safety and Medical Examination .....	93	
		<hr/> 468

## Special Medical Equipment:

Division of Safety and Medical Examination .....	4,167	
		<hr/> 4,167

Total Construction Period—Third Year . . . \$129,710

[fol. 8409] Supervision Costs Allocated to Specific Property  
Accounts

## General Summary

Salaries .....	\$260,440
Stationery and Office Supplies .....	10,216
Transportation (Cost of Operation plus Depreciation) .....	79,612
Traveling Expense .....	44,075
Communication Expense .....	30,400
Office Furniture and Fixtures (Depreciation Only) .....	891
Total .....	<hr/> \$425,634

[fol. 8410] Supervision Costs Allocated to Specific Property  
Accounts

## Pre-Construction Period

## Division of Pipe Line Construction:

Salaries .....	\$3,785
Stationery and Office Supplies .....	127
Transportation Expense .....	2,438
Traveling Expense .....	600
Communication Expense .....	415
Office Furniture and Fixtures—Depreciation only .....	38

## Defendant's Exhibit No. 28—Continued

Division of Compressor Station  
Construction:

Salaries .....	5,970	
Stationery and Office Supplies .....	198	
Transportation Expense .....	1,151	
Traveling Expense .....	700	
Communication Expense .....	1,053	
Office Furniture and Fixtures—Depre- ciation only .....	39	
	<hr/>	9,111

Division of Telephone Line Con-  
struction:

Salaries .....	1,955	
Stationery and Office Supplies .....	99	
Transportation Expense .....	1,038	
Traveling Expense .....	325	
Communication Expense .....	415	
Office Furniture and Fixtures—Depre- ciation only .....	23	
	<hr/>	3,855

Division of Drilling and Produc-  
tion:

Salaries .....	12,510	
Stationery and Office Supplies .....	381	
Transportation Expense .....	4,470	
Traveling Expense .....	2,250	
Communication Expense .....	1,579	
Office Furniture and Fixtures—Depre- ciation only .....	38	
	<hr/>	21,228

Total Pre-Construction Period .....	<hr/> <hr/>	\$41,597
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## Defendant's Exhibit No. 28—Continued

## Construction Period—First Year

## Division of Pipe Line Construction:

Salaries .....	\$25,620	
[fol. 8411] Stationery and Office Supplies .....	1,102	
Transportation Expense .....	7,752	
Traveling Expense .....	4,500	
Communication Expense .....	3,158	
Office Furniture and Fixtures—Depreciation only .....	77	
	<hr/>	\$42,209

## Division of Compressor Station Construction:

Salaries .....	25,320	
Stationery and Office Supplies .....	1,020	
Transportation Expense .....	5,004	
Traveling Expense .....	3,000	
Communication Expense .....	3,158	
Office Furniture and Fixtures—Depreciation only .....	78	
	<hr/>	37,580

## Division of Telephone Line Construction:

Salaries .....	11,220	
Stationery and Office Supplies .....	593	
Transportation Expense .....	3,477	
Traveling Expense .....	2,400	
Communication Expense .....	1,058	
Office Furniture and Fixtures—Depreciation only .....	46	
	<hr/>	18,794

## Defendant's Exhibit No. 28—Continued

## Division of Drilling and Production:

Salaries .....	25,020	
Stationery and Office Supplies .....	762	
Transportation Expense .....	8,940	
Traveling Expense .....	4,500	
Communication Expense .....	3,158	
Office Furniture and Fixtures—Depreciation only .....	76	
	<hr/>	42,456
Total Construction Period—First Year .....		<u><u>\$141,039</u></u>

## Construction Period—Second Year

## Division of Pipe-Line Construction:

Salaries .....	\$25,620	
Stationery and Office Supplies .....	1,102	
Transportation Expense .....	7,752	
Traveling Expense .....	4,500	
Communication Expense .....	3,158	
Office Furniture and Fixtures—Depreciation only .....	77	
	<hr/>	42,209

## [fol. 8412] Division of Compressor Station Construction:

Salaries .....	\$25,320	
Stationery and Office Supplies .....	1,020	
Transportation Expense .....	5,004	
Traveling Expense .....	3,000	
Communication Expense .....	3,158	
Office Furniture and Fixtures—Depreciation only .....	78	
	<hr/>	\$37,580

## Defendant's Exhibit No. 28—Continued

## Division of Telephone Line Construction:

Salaries .....	11,220	
Stationery and Office Supplies .....	593	
Transportation Expense .....	3,477	
Traveling Expense .....	2,400	
Communication Expense .....	1,058	
Office Furniture and Fixtures—Depreciation only .....	46	
	<hr/>	18,794

## Division of Drilling and Production:

Salaries .....	25,020	
Stationery and Supplies .....	762	
Transportation Expense .....	8,940	
Traveling Expense .....	4,500	
Communication Expense .....	3,158	
Office Furniture and Fixtures—Depreciation only .....	76	

Total Construction Period—Second Year. \$141,032

## Construction Period—Third Year

## Division of Pipe Line Construction:

Salaries .....	\$25,620	
Stationery and Office Supplies .....	1,102	
Transportation Expense .....	7,752	
Traveling Expense .....	4,500	
Communication Expense .....	1,658	
Office Furniture and Fixtures—Depreciation only .....	77	
	<hr/>	\$40,709

## Defendant's Exhibit No. 28—Continued

## Division of Telephone Line Construction:

Salaries .....	11,220	
Stationery and Office Supplies .....	593	
Transportation Expense .....	3,477	
Traveling Expense .....	2,400	
Communication Expense .....	1,058	
Office Furniture and Fixtures—Depreciation only .....	46	
	<hr/>	18,794

## [fol. 8413] Division of Drilling and Production:

Salaries .....	\$25,020	
Stationery and Office Supplies .....	762	
Transportation Expense .....	8,940	
Traveling Expense .....	4,500	
Communication Expense .....	3,158	
Office Furniture and Fixtures—Depreciation only .....	76	
	<hr/>	42,456

Total Construction Period—Third Year .. \$101,959

## [fol. 8414] General Supervision of Construction Costs and Supervision Costs Allocated to Specific Property Accounts

## Definition:

As used in this estimate of the reproduction cost of the property and business of Lone Star Gas Company, General Supervision of Construction Costs are intended to cover the salaries and expenses of the general superintendent of construction, the superintendent of automotive and construction equipment and the engineer in charge of the safety and medical examination department. Also the cost of all supplies, the salaries and expenses of assistants, physicians and examiners, clerks and stenographers, office rent or its equivalent cost, tolls, telephones and telegrams, automobile expense, depreciation on furniture, fixtures and equipment and all other charges that would be attributable to the general su-



pervision of construction, the maintenance and care of automotive and construction equipment, and the safety work and medical examination in the reproduction of the physical property of Lone Star Gas Company as of January 1, 1933.

As used in this estimate, supervision costs allocated to specific property accounts are intended to cover the salaries and expenses of the superintendent of pipe line construction, the superintendent of drilling operations and gas production, the superintendent of compressor station construction and the superintendent of telephone line construction. Also the cost of all supplies, the salaries and expenses of their assistants, clerks and stenographers, office rent or its equivalent cost, tolls, telephones, telegrams, automobile expenses, depreciation on furniture, fixtures and equipment and all other charges that would be attributable to the construction of lines and appurtenant equipment, compressor stations, [fol. 8415] telephone lines and the drilling of wells and the production of gas in the reproduction of the physical property of Lone Star Gas Company as of January 1, 1933.

This estimate of the Cost of General Supervision of Construction and Supervision Cost allocated to specific property accounts does not include the cost of supervision and inspection allocated to specific property accounts and included in the unit costs applied to items of physical property.

While the estimate of Supervision Costs allocated to specific property accounts is set out in this section of the report, it is shown as a part of the cost of reproduction in connection with the general summaries of the reproduction cost of the various property accounts in Volume I of the report.

It is obvious that the duties of the general superintendent and his office organization, the superintendent of automotive and construction equipment and his organization, and the engineer in charge of safety and medical examination together with his staff would be so general in their nature as to prevent the rational distribution of the salaries and expenses of these groups to specific property accounts. For this reason, the salaries and expenses of the general superintendent and his organization, the superintendent of automotive and construction equipment and his organization and the engineer in charge of safety and medical examination and his staff have been separately determined and set out as a part of Undistributed General Costs.

### General Organization Plan and Duties of the Construction Section:

In the development of Supervision of Construction Costs that would be involved in the reproduction of Lone Star Gas [fol. 8416] Company as of January 1, 1933, the actual construction organization of the company during recent years in which the company was actually constructing portions of its plant costing more than \$20,000,000, has been followed in detail. In no other section of the company's general organization does the history of its own operations furnish a more definite basis for estimate.

In the reproduction of the property of Lone Star Gas Company, the responsible head of the Construction Section would be the general superintendent. Following the division of responsibility set out in the general organization plan, the general superintendent would conduct and direct the work of the Construction Section under the general supervision of the vice-president and general manager of the company.

The Construction Section would be divided into six construction divisions, each division being directly responsible for a definite part of the construction program. The Construction Division would be as follows:

1. Division of Pipe Line Construction.
2. Division of Compressor Station Construction.
3. Division of Telephone Construction.
4. Division of Plant and Equipment.
5. Division of Drilling and Production.
6. Division of Safety and Medical Examination.

Each of the above construction divisions would be in charge of a division superintendent who would report, and be directly responsible to the general superintendent.

In addition to the heads of the Construction Division, the chief engineer, whose specific duties are set out in detail under General Engineering Costs, would report to the general superintendent.

In connection with its general duties, the office of the [fol. 8417] general superintendent would:

1. Direct the general operations of each of the construction Divisions

2. Co-ordinate the work of the Construction Divisions
3. Plan the work from a construction standpoint, and authorize its execution by the proper Division
4. Correlate the progress reports of the various Divisions into a consolidated report for the office of the general manager
5. Approve all plans for construction prepared by the Engineering Section
6. Inspect and approve pipe line routes in different territory
7. Inspect and approve final bridge and under-river crossings
8. Inspect and approve final locations of compressor stations
9. Approve final size of all transmission lines
10. Approve all requisitions for the purchase of materials and equipment
11. Approve well locations and drilling operations.
12. Prepare estimates of progress and probable cash requirements for use by the Treasury Section

The Construction Section would be organized immediately upon the completion of corporate organization by the employment of the general superintendent who in turn would begin the organization of his Construction Divisions by the employment of the Division superintendent in the order that the progress of the work would require.

### Personnel Analysis

#### General Superintendent:

The general and specific duties of the general superintendent have been set out under the discussion of the duties of the office of the general superintendent.

#### Chief Clerk to the General Superintendent:

The general office of the Construction Section would require a chief clerk whose duties would be confined solely to

the details of the office of the ~~general~~ superintendent. The routine work of the general superintendent would require his presence in the field at frequent intervals, and at such [fol. 8418] times all office routines would be in charge of the chief clerk.

The chief clerk would also direct the work of the stenographic group in the preparation of all progress reports and other necessary construction reports.

In order to properly perform the duties of his office, the chief clerk would necessarily be a man who had had previous experience in similar work. His duties would require a general familiarity with each phase of the construction in progress, and a familiarity with the office routines of a large construction organization.

#### Stenographic Group:

The large number of detailed reports that would originate in the office of the general superintendent, together with the large amount of inter-departmental and outside correspondence that the construction program would entail, would require the services of not less than five stenographers during the period of actual construction.

In connection with the office personnel of the general superintendent, it is estimated that the chief clerk would be engaged immediately upon the employment of the general superintendent, that one stenographer would be engaged at the same time, that two additional stenographers would be engaged three months prior to the beginning of construction, and that the organization would be complete at the date of the beginning of actual construction.

### Division of Pipe Line Construction

#### Superintendent of Pipe Line Construction:

The superintendent of pipe line construction would be directly responsible for the construction of all lines including main transmission lines, gathering lines, well lines and [fol. 8419] tap lines, together with all the collateral equipment including measuring station structures and equipment, and regulator station structures and equipment. He would be directly responsible for the progress of the work and the costs of construction. He would also prepare for the gen-

eral superintendent complete progress reports covering the amount of work performed and the cost of same.

A man qualified for this position would necessarily be a man with wide experience in pipe line construction in all of its phases and would also possess qualities of leadership and executive ability.

#### Assistant Pipe Line Superintendent:

Owing to the extent of the pipe line construction that would be simultaneously in progress, not less than three assistant superintendents who would have charge of divisional activities would be required for the proper co-ordination and progress of the work. These assistant superintendents would remain constantly in the field and would provide the necessary contacts between the pipe line superintendent and his office and actual construction.

Each of these men would be experienced pipe line constructors, and would also possess the necessary executive qualifications the co-ordination of the work of the large personnel of direct construction employees would require.

#### Chief Clerk:

The chief clerk would have responsible charge of the office routines of the pipe line superintendent. He would assist in the preparation of reports and the filing of the same, and also have responsible charge of the office and subordinate employees in the absence of the pipe line superintendent.

The chief clerk would be required to have a general [fol. 8420] knowledge of all matters pertaining to pipe line construction.

#### Assistant Clerk:

Due to the volume of details that would be handled by the office of the pipe line superintendent during a three year construction period that involved the construction of approximately four thousand miles of pipe lines within a three year construction period, the services of an assistant clerk would be required.

The assistant clerk would assist the chief clerk in all routine matters, summarize the daily progress reports of the



assistant superintendents and construction foremen, keep cost data, assist in filing, and have charge of the work of the stenographers.

#### Stenographic Group:

Two stenographers would be required for the typing of reports, and the writing of inter-divisional and outside correspondence.

It is estimated that the pipe line superintendent, the chief clerk and one stenographer would be employed three months prior to the beginning of construction, that the assistant superintendents, the assistant clerk and the second stenographer would be employed one month prior to the beginning of construction.

#### Division of Compressor Station Construction

##### Superintendent of Compressor Station Construction:

The superintendent of compressor station construction would be directly responsible for the progress and costs of all compressor station construction. He would also be in responsible charge of his office organization and field personnel. He would assist in the preparation of design, the selection of equipment and materials of construction. Together with the general superintendent and chief engineer, he would assist in the selection of compressor station sites, [fol. 8421] sources of water supply, and in other similar matters.

As the construction progressed, he would be responsible for changes in plans and specifications that would be brought about by the contingencies of construction or unforeseen conditions.

The superintendent of compressor station construction would be a mechanical engineer thoroughly familiar with all details of compressor station construction and operation.

##### Assistant Superintendents of Compressor Station Construction:

The construction program adopted that contemplates that the compressor stations of Lone Star Gas Company as of January 1, 1933, would be completed during the first and



second construction years would require that four or more stations be under construction simultaneously. An assistant superintendent of construction would be placed in general charge of two or more stations as the progress of the work required. These assistants would remain in the field and keep the office in contact with the field operations. They would also keep accurate records of all construction costs and decide on minor changes in construction requiring prompt attention.

Each of the assistant superintendents would be men experienced in compressor station construction and operation.

The duties of the assistant superintendents can be classified by an outline of the building sequence that the construction program imposes.

#### Assistant Superintendent Number 1

##### First Year

Unit Number 1.....	Petrolia	Seven	Months
	Joshua	Three	Months
Unit Number 2.....	Gas City	Four	Months

[fol. 8422]

Fox Central	Three	Months
Caddo	Five	Months

##### Second Year

Unit Number 1.....	Fox East	Four	Months
	Eastland	Five	Months
	Joshua No. 2	Three	Months
Unit Number 2.....	Loco	Four	Months
	Ranger No. 1	Four	Months
	Ranger No. 2	Four	Months

#### Assistant Superintendent Number 2

##### First Year

Unit Number 3.....	Pueblo	Three	Months
	Breckenridge	Five	Months
	Ibex	Four	Months
Unit Number 4.....	Ranger No. 4	Three	Months
	Ranger No. 3	Five	Months
	Sipe Springs	Four	Months

##### Second Year

Unit Number 3.....	Brad	Three	Months
	Brazos	Three	Months
	Tiffin	Three	Months
	Alvord	Three	Months
Unit Number 4.....	x-ray	Three	Months
	Cheaney	Five	Months
	Desdemona	Four	Months

#### Office Engineer:

The office engineer would assist in the selection of and make requisitions for all materials, plot progress and cost on all units under construction. He would have responsible charge of the office and its routines when the super-

intendent was in the field. He would make such changes in the original designs as actual construction conditions required, and would keep a complete record of such changes. He would check the delivery of all materials, and make estimates for future requirements.

#### Draftsman:

[fol. 8423] An office draftsman would be required for the purpose of currently maintaining a complete graphic record of each installation, setting out in detail all deviations from original designs and plans.

#### Stenographic Group:

Two stenographers would be required to prepare and file progress reports, and handle the current correspondence of the office.

It is estimated that the superintendent of compressor station construction and one stenographer would be employed four months prior to the beginning of construction. The assistant superintendents, office engineer, draftsman, and one stenographer would be employed two months prior to the beginning of construction.

### Division of Telephone System Construction

#### Superintendent of Telephone System Construction:

The superintendent of telephone system construction would have responsible charge of the construction of the entire telephone system of Lone Star Gas Company as of January 1, 1933. He would be directly responsible for the progress and cost of the work. He would prepare for the information of the general superintendent progress reports and cost data, and would be generally responsible for the personnel engaged in his division.

The nature of his work would demand that he be experienced in construction, and have specific knowledge of the details of telephone line construction and operation.

#### Assistant Superintendent:

For the purpose of establishing inter-communication between the field and general office as quickly and as completely as possible, it would be necessary to

maintain telephone line construction crews at various points in the system. This construction program would require the employment of — assistant superintendent who would remain in the field and co-ordinate the work of the various construction organizations. He would furnish the general office full information covering progress and cost data.

**Clerk:**

One office clerk would be required to tabulate and file all information relative to progress and costs. He would also have charge of the office routines in the absence of the superintendent.

**Stenographer:**

One stenographer would be required for the typing of reports and the maintenance of inter-departmental and outside correspondence.

The superintendent of telephone system construction and stenographer would be employed three months prior to the beginning of construction, and the assistant superintendent and clerk one month prior to the beginning of construction.

**Division of Plant and Equipment**

**Superintendent of Plant and Equipment:**

Under the organization plan of Lone Star Gas Company, the superintendent of plant and equipment would be generally responsible for the selection of all automotive and construction equipment. He would also be responsible for the maintenance of cost records of operation and repairs. He would have a general supervision over all shops and equipment used for the repair and maintenance of automotive and construction equipment. He would direct supervision of his office organization, shop foreman, and traveling inspectors.

A man qualified for this position would be familiar with [fol. 8425] all types of equipment used in construction, the normal costs of operation and maintenance of all types of automotive and construction equipment. He would also be required to be expert in cost accounting methods.

### Clerks:

Two office clerks and one typist clerk would be required to maintain operating and repair cost records on the equipment in service.

### Field Inspectors:

Three field or traveling inspectors would be employed for the purpose of making periodic checks on all equipment in service for the purpose of preventing serious break-downs. They would also report on all improper use of equipment, and instruct all operators with reference to the proper care of equipment.

The superintendent of plant and equipment would be employed three months prior to the beginning of construction, and the office clerks and inspectors would be employed one month prior to construction.

## Division of Drilling and Production,

### Superintendent of Drilling and Production:

The superintendent of drilling and production would be directly responsible for the letting of all drilling contracts, and would have responsible charge of all drilling operations.

In connection with actual field operations, he would be generally responsible for the setting of pipe and the finishing of wells, the ordering of material used in drilling operations, and the arranging for water and fuel. He would also be directly responsible for the letting of contracts for the construction of rigs and the handling of [fol. 8426] material.

In connection with the Geological Section, he would be responsible for the abandonment of drilling. He would be directly responsible for the routines of his office, the maintenance of drilling records and costs, and the direction of the personnel of the Division.

### Assistant Superintendents:

In view of the fact that the reproduction program contemplates the completion of all producing gas wells owned by Lone Star Gas Company as of January 1, 1933, with the exception of the fifty eight wells assumed to have been completed prior to organization during a three and one-

half-year period, it would be necessary to have three assistant superintendents in the field, one in direct charge of operations in West Texas, one in direct charge of operations in the Panhandle, and one in direct charge of operations in Southern Oklahoma. They would keep in constant contact with all drilling within their respective areas, keep the office advised as to progress and cost, and assist the foremen in direct charge of the individual rigs.

#### Clerk:

One office clerk would be required to maintain records and files, and assume responsible charge of the office routines during the absence of the superintendent of drilling and production.

#### Stenographer:

One stenographer would be required for the typing of progress reports and cost data, and for the maintenance of inter-departmental and outside correspondence.

The entire organization of the Division of Drilling and [fol. 8427] Production would be engaged from the date of incorporation to the end of the construction period.

Each of the superintendents would be men with a wide experience in the drilling for and production of gas, the care of wells after completion, and specific knowledge with reference to the problems encountered in the territories in which Lone Star Gas Company owns producing wells.

### Division of Safety and Medical Examination

#### Supervisor of Safety:

The supervisor of safety would have general supervision over all safety activities and the physical examination of all prospective employees. He would also act as personal officer for the Construction Section. It would be his duty to select competent safety engineers, doctors and personnel men, provide the necessary equipment and supplies for carrying on all safety work and physical examinations, and provide the various construction crews with an adequate supply of labor.



### Safety Engineers:

In addition to the supervisor of safety, three safety engineers would be employed. The safety engineers would be located at the most advantageous points where they could best serve the greatest number of employees. It would be their duty to make regular inspection of tools, equipment, and the work as it progressed, making suggestions and recommendations for the correction of or eliminating hazards, see that all first aid kits are kept stocked, to conduct safety meetings, and various other work which might arise in the course of construction work.

### Chief Medical Examiner:

[fol. 8428] It would be the duty of the chief medical examiner to select, in co-operation with the supervisor of safety, the examining physicians, to detail and supervise their work, locating them so that they would be able to take care of the greatest number of men. It would also be the duty of the chief medical examiner to decide upon certain questions of a man's physical fitness in the event one of the junior or assistant examiners was unable to decide. In addition to the duties as outlined above, we would also expect for the chief medical examiner to go from place to place, as the occasion demanded, to examine small groups of men where the number would not justify the location of a resident or assistant examiner.

### Examining Physicians:

Four examining physicians would be required. It would be the duty of the examining physicians to examine all prospective employees to determine their physical fitness for the work to be required of them, and to render first aid in case of accidents. We would not, however, require them to do more than render first aid to the injured, as the expense of all medical and hospital treatment is taken care of by the compensation insurance carriers. The examining physicians, as already mentioned, would be located at points where they would be able to take care of the greatest number of employees.



### Personnel Man:

The personnel man will be in charge of all personnel records, will keep in touch with the various construction foremen, and keep them supplied with labor. It will be his duty to contact the Chamber of Commerce and employment bureau officials in the various towns along the proposed lines to secure their assistance in supplying local labor for the construction crews and to scout boarding house accommodations for workmen.

### Office Group:

One chief clerk and three stenographers would be required to maintain records, files and current correspondence.

The Division of Safety and Medical Examination would be organized one month prior to the beginning of construction.

### Schedule of Salaries:

In fixing the salaries of the various responsible members of the Construction Section, consideration has been given to the obvious fact that each of them would necessarily be a man possessed of outstanding qualifications in his particular line of work. This fact is reflected in the unit costs of construction applied to the individual items of physical property in the section of this report dealing with the reproduction cost of the physical items. These costs have been based in a large measure upon the actual construction costs of Lone Star Gas Company. The organization responsible for these costs was secured by a process of the survival of the fittest extending over a period of twenty years.

In order to secure such an organization for the purpose of reproducing the property of Lone Star Gas Company within a construction period of three years, the personnels of other large companies would be drawn upon, and only the most competent men engaged. It would be impossible to develop and train such men as is normally done in companies in the process of gradual growth.

## Defendant's Exhibit No. 28—Continued

## Office of General Superintendent

Position	Rate Per Month	Rate Per Annum
General Superintendent.....	\$1,250	\$15,000
Chief Clerk.....	300	3,600
Assistant Clerk.....	175	2,100

[fol. 8430]

One Stenographer.....	125	1,500
Four Stenographers (Each).....	110	1,320

## Division of Pipe Line Construction

Position		
Superintendent.....	500	6,000
Three Assistant Superintendents (Each).....	350	4,200
Chief Clerk.....	200	2,400
Assistant Clerk.....	150	1,800
Stenographer.....	125	1,500
Stenographer.....	110	1,320

## Division of Compressor Station Construction

Position		
Superintendent.....	750	9,000
Two Assistant Superintendents (Each).....	350	4,200
Office Engineer.....	250	3,000
Draftsman.....	175	2,100
Stenographer.....	125	1,500
Stenographer.....	110	1,320

## Division of Telephone Line Construction

Position		
Superintendent.....	400	4,800
Assistant Superintendent.....	250	3,000
Clerk.....	175	2,100
Stenographer.....	110	1,320

## Division of Plant and Equipment

Position		
Superintendent.....	400	4,800
Three Inspectors (Each).....	200	2,400
Two Clerks and Cost Accountants (Each).....	150	1,800
Typist Clerk.....	125	1,500

## Division of Drilling and Production

Position		
Superintendent.....	750	9,000
Three Assistant Superintendents (Each).....	350	4,200
Clerk.....	175	2,100
Stenographer.....	110	1,320

## Defendant's Exhibit No. 28—Continued

[fol. 8431]

Division of Safety and Medical Examination		Rate Per Month	Rate Per Annum
Position			
Supervisor .....		\$400	\$4,800
Three Engineers (Each) .....		225	2,700
Chief Examiner .....		300	3,600
Four Assistant Examiners (Each) .....		200	2,400
Personnel man .....		250	3,000
Chief Clerk .....		175	2,100
Three Stenographers (Each) .....		110	1,320

## Distribution of Salaries by Periods

## Office of General Superintendent

## Pre-Construction Period

General Superintendent, Six months at \$1,250 .....	\$7,500
Chief Clerk, Six months at \$300 .....	1,800
Stenographer, Six months at \$125 .....	750
Assistant Clerk, Three months at \$175 .....	525
Stenographer, Three months at \$110 .....	330
Stenographer, Three months at \$110 .....	330
Total .....	\$11,400

## First Construction Year

General Superintendent .....	\$15,000
Chief Clerk .....	3,600
Assistant Clerk .....	2,100
One Stenographer (\$125.00) .....	1,500
Four Stenographers (\$110.00) .....	5,280

Total .....	\$27,480
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Second Construction Year .....	\$27,480
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Third Construction Year .....	\$27,480
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## Division of Pipe Line Construction

## Pre-Construction Period

Superintendent, Three months at \$500 .....	\$1,500
Chief Clerk, Three months at \$200 .....	600
Stenographer, Three months at \$125 .....	375
Assistant Supt., One month at \$350 .....	350
Assistant Supt., One month at \$350 .....	350
Assistant Supt., One month at \$350 .....	350
Clerk, One month at \$150 .....	150

## Defendant's Exhibit No. 28—Continued

[fol. 8432]

## Pre-Construction Period

Stenographer, One month at \$110 .....	\$110
Total .....	<u>\$3,785</u>

## First Construction Year

Superintendent .....	\$6,000
Assistant Superintendent .....	4,200
Assistant Superintendent .....	4,200
Assistant Superintendent .....	4,200
Chief Clerk .....	2,400
Clerk .....	1,800
Stenographer .....	1,500
Stenographer .....	1,320
Total .....	<u>\$25,620</u>

Second Construction Year .....

\$25,620

Third Construction Year .....

\$25,620

## Division of Compressor Station Construction

## Pre-Construction Period

Superintendent, Four months at \$750 .....	\$3,000
Stenographer, Four months at \$125 .....	500
Assistant Supt., Two months at \$350 .....	700
Assistant Supt., Two months at \$350 .....	700
Office Engineer, Two Months at \$250 .....	500
Draftsman, Two months at \$175 .....	350
Stenographer, Two months at \$110 .....	220
Total .....	<u>\$5,970</u>

## First Construction Year

Superintendent .....	\$9,000
Assistant Superintendent .....	4,200
Assistant Superintendent .....	4,200
Office Engineer .....	3,000
Draftsman .....	2,100
Stenographer .....	1,500
Stenographer .....	1,320
Total .....	<u>\$25,320</u>

[fol. 8433]

Second Construction Year .....

\$25,320

## Defendant's Exhibit No. 28—Continued

## Division of Telephone Line Construction

## Pre-Construction Period

Superintendent, Three months at \$400.....	\$1,200
Stenographer, Three months at \$110.....	330
Assistant Supt., One month at \$250.....	250
Clerk, One month at \$175.....	175

Total.....	<u>\$1,955</u>
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## First Construction Year

Superintendent.....	\$4,800
Assistant Superintendent.....	3,000
Clerk.....	2,100
Stenographer.....	1,320

Total.....	<u>\$11,220</u>
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Second Construction Year.....	<u>\$11,220</u>
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Third Construction Year.....	<u>\$11,220</u>
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## Division of Plant and Equipment

## Pre-Construction Period

Superintendent, Three months at \$400.....	\$1,200
Inspector, One month at \$200.....	200
Inspector, One month at \$200.....	200
Inspector, One month at \$200.....	200
Clerk, One month at \$150.....	150
Clerk, One month at \$150.....	150
Typist Clerk, One month at \$125.....	125

Total.....	<u>\$2,225</u>
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## First Construction Year

Superintendent.....	\$4,800
Inspector.....	2,400
Inspector.....	2,400
Inspector.....	2,400
Clerk.....	1,800
Clerk.....	1,800
Typist Clerk.....	1,500

Total.....	<u>\$17,100</u>
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[fol. 8434]

Second Construction Year.....	<u>\$17,000</u>
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Third Construction Year.....	<u>17,000</u>
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## Defendant's Exhibit No. 28—Continued

## Division of Drilling and Production

## Pre-Construction Period

Superintendent, Six months at \$750.....	\$4,500
Assistant Supt., Six months at \$350.....	2,100
Assistant Supt., Six months at \$350.....	2,100
Assistant Supt., Six months at \$350.....	2,100
Clerk, Six months at \$175.....	1,050
Stenographer, Six months at \$110.....	660
Total.....	<u>\$12,510</u>

## First Construction Year

Superintendent.....	\$9,000
Assistant Superintendent.....	4,200
Assistant Superintendent.....	4,200
Assistant Superintendent.....	4,200
Clerk.....	2,100
Stenographer.....	1,320
Total.....	<u>\$25,020</u>

Second Construction Year..... \$25,020

Third Construction Year..... \$25,020

## Division of Safety and Medical Examination

## Pre-Construction Period

Supervisor, One month at \$400.....	\$400
Engineer, One month at \$225.....	225
Engineer, One month at \$225.....	225
Engineer, One month at \$225.....	225
Engineer, One month at \$225.....	225
Engineer, One month at \$225.....	225
Chief Examiner, One month at \$300.....	300
Assistant Examiner, One month at \$200.....	200
Assistant Examiner, One month at \$200.....	200
Assistant Examiner, One month at \$200.....	200
Assistant Examiner, One month at \$200.....	200
Personnel Man, One month at \$250.....	250

[fol. 8435]

## Pre-Construction Period

Chief Clerk, One month at \$175.....	\$175
Stenographer, One month at \$110.....	110
Stenographer, One month at \$110.....	110
Stenographer, One month at \$110.....	110
Total.....	<u>\$2,930</u>



## Defendant's Exhibit No. 28—Continued

## First Construction Year

Supervisor.....	\$4,800
Engineer.....	2,700
Engineer.....	2,700
Engineer.....	2,700
Chief Examiner.....	3,600
Assistant Examiner.....	2,400
Assistant Examiner.....	2,400
Assistant Examiner.....	2,400
Assistant Examiner.....	2,400
Personnel man.....	3,000
Chief Clerk.....	2,100
Stenographer.....	1,320
Stenographer.....	1,320
Stenographer.....	1,320

Total.....\$35,160

Second Construction Year.....\$35,160

Third Construction Year.....\$35,160

\* \* \* \* \*

## Stationery and Office Supplies—By Periods

## Office of General Superintendent

Pre-Construction Period.....	\$339
First Construction Year.....	1,180
Second Construction Year.....	1,180
Third Construction Year.....	1,180

## Division of Pipe Line Construction

Pre-Construction Period.....	\$127
First Construction Year.....	1,102
Second Construction Year.....	1,102
Third Construction Year.....	1,102

[fol. 8436]

## Division of Compressor Station Construction

Pre-Construction Period.....	\$198
First Construction Year.....	1,020
Second Construction Year.....	1,020

## Division of Telephone System Construction

Pre-Construction Period.....	\$99
First Construction Year.....	593
Second Construction Year.....	593
Third Construction Year.....	593

## Defendant's Exhibit No. 28—Continued

## Division of Plant and Equipment

Pre-Construction Period.....	\$113
First Construction Year.....	933
Second Construction Year.....	933
Third Construction Year.....	933

## Division of Drilling and Production

Pre-Construction Period.....	\$381
First Construction Year.....	762
Second Construction Year.....	762
Third Construction Year.....	762

## Division of Safety and Medical Examination

Pre-Construction Period.....	\$57
First Construction Year.....	1,696
Second Construction Year.....	1,696
Third Construction Year.....	1,696

\* \* \* \* \*

## Transportation Expense—By Periods

## Office of General Superintendent

## Equipment

One Packard Sedan—Cost \$2,970  
 Operation per mile, 8 cents

## Pre-Construction Period

Depreciation at \$71.00 per month.....	\$426
Operation 12,000 miles at 8 cents per mile.....	960

Total.....\$1,386

## First Construction Year

Depreciation at \$71.00 per month.....	\$852
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[fol. 8437]

## Office of General Superintendent

## First Construction Year

Operation 18,000 miles at 8 cents per mile.....	\$1,440
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Total.....\$2,292

Second Construction Year.....\$2,292

Third Construction Year.....\$2,292

## Division of Pipe Line Construction

## Equipment

One Master Buick and  
 Three Standard Buicks

## Defendant's Exhibit No. 28—Continued

Cost \$5,800

Operation per Mile 5 cents

## Pre-Construction Period

Depreciation at \$146.00 per month.....	\$438
Operation 40,000 miles at 5 cents per mile.....	2,000
Total.....	<u>\$2,438</u>

## First Construction Year

Depreciation at \$146.00 per month.....	\$1,752
Operation 120,000 miles at 5 cents per mile.....	6,000
Total.....	<u>\$7,752</u>

Second Construction Year..... \$7,752Third Construction Year..... \$7,752

## Division of Compressor Station Construction

## Equipment

One Master Buick, Two Standard

Buicks—Cost \$4,560

Operation per mile 5 cents

## Pre-Construction Period

Depreciation at \$117.00 per month.....	\$351
Operation 16,000 miles at 5 cents per mile.....	800
Total.....	<u>\$1,151</u>

[fol. 8438]

## Division of Compressor Station Construction

## First Construction Year

Depreciation at \$117.00 per month.....	\$1,404
Operation 72,000 miles at 5 Cents per mile.....	3,600
Total.....	<u>\$5,004</u>

Second Construction Year..... \$5,004

## Defendant's Exhibit No. 28—Continued

## Division of Telephone Line Construction

## Equipment

One Standard Buick  
 One Chevrolet—Cost \$1,806  
 Operation per mile 4.5 cents

## Pre-Construction Period

Depreciation at \$46.00 per month..... \$138  
 Operation 20,000 miles at 4.5 cents per mile..... 900

Total..... \$1,038

## First Construction Year

Depreciation at \$46.00 per month..... \$552  
 Operation 65,000 miles at 4.5 cents per mile..... 2,925

Total..... \$3,477

Second Construction Year..... \$3,477

## Division of Plant and Equipment

## Equipment

One Standard Buick—Three  
 Chevrolets—Cost \$2,970  
 Operation per mile 4.5 cents

## Pre-Construction Period

Depreciation Period \$76.00 per month..... \$228  
 Operation 10,000 miles at 4.5 cents per mile..... 450

Total..... \$678

## First Construction Year

Depreciation at \$76.00 per month..... \$912  
 Operation 120,000 miles at 4.5 cents per mile..... 5,400

Total..... \$6,312

[fol. 8439]

## Division of Plant and Equipment

Second Construction Year..... \$6,312

Third Construction Year..... \$6,312

## Division of Drilling and Production

## Equipment

One Master Buick—Three  
 Standard Buicks—Cost \$5,800  
 Operation per mile 5.5 cents

## Defendant's Exhibit No. 28—Continued

## Pre-Construction Period

Depreciation at \$140.00 per month.....	\$840
Operation 66,000 miles at 5.5 cents per mile.....	3,630

Total.....	<u>\$4,470</u>
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## First Construction Year

Depreciation at \$140.00 per month.....	\$1,680
Operation 132,000 miles at 5.5 cents per mile.....	7,260

Total.....	<u>\$8,940</u>
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Second Construction Year.....	<u>\$8,940</u>
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Third Construction Year.....	<u>\$8,940</u>
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## Division of Safety and Medical Examination

## Equipment

Nine Chevrolets—Cost 5,220  
Operation per mile 4 cents

## Pre-Construction Period

## First Construction Year

Depreciation at \$144.00 per month.....	\$1,728
Operation 250,000 miles at 4 cents per mile.....	10,000

Total.....	<u>\$11,728</u>
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Second Construction Year.....	<u>\$11,728</u>
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Third Construction Year.....	<u>\$11,728</u>
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## [fol. 8440] Traveling Expense—By Periods

## Office of General Superintendent

## Pre-Construction Period

General Superintendent 90 days at \$7.00 per day.....	<u>\$630</u>
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## First Construction Year

General Superintendent 120 days at \$7.00 per day.....	<u>\$840</u>
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Second Construction Year.....	<u>\$840</u>
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Third Construction Year.....	<u>\$840</u>
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2909

## Defendant's Exhibit No. 28—Continued

## Division of Pipe Line Construction

## Pre-Construction Period

Superintendent 60 days at \$5.00 per day .....	\$300
Assistant Superintendent 75 Days at \$4.00 per day .....	300

Total .....	<u>\$600</u>
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## First Construction Year

Superintendent 180 days at \$5.00 per day .....	\$900
Assistant Superintendent 900 days at \$4.00 per day .....	3,600

Total .....	<u>\$4,500</u>
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Second Construction Year .....	<u>\$4,500</u>
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Third Construction Year .....	<u>\$4,500</u>
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## Division of Compressor Station Construction

## Pre-Construction Period

Superintendent 60 days at \$5.00 per day .....	\$300
Assistant Superintendents 100 days at \$4.00 per day .....	400

Total .....	<u>\$700</u>
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## First Construction Year

Superintendent 120 days at \$5.00 per day .....	\$600
Assistant Superintendents 600 days at \$4.00 per day .....	2,400

Total .....	<u>\$3,000</u>
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[fol. 8441]

## Division of Compressor Station Construction

Second Construction Year .....	<u>\$3,000</u>
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## Division of Telephone Line Construction

## Pre-Construction Period

Superintendent 45 days at \$5.00 per day .....	\$225
Assistant Superintendent 25 days at \$4.00 per day .....	100

Total .....	<u>\$325</u>
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## First Construction Year

Superintendent 240 days at \$5.00 per day .....	\$1,200
Assistant Superintendent 300 days at \$4.00 per day .....	1,200

Total .....	<u>\$2,400</u>
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21909



## Defendant's Exhibit No. 28—Continued

Second Construction Year.....	\$2,400
Third Construction Year.....	\$2,400
Division of Plant and Equipment	
Pre-Construction Period	
Superintendent 45 days at \$5.00 per day.....	\$225
Inspectors 30 days at \$4.00 per day.....	120
Total.....	\$345
First Construction Year	
Superintendent 120 days at \$5.00 per day.....	\$600
Inspectors 900 days at \$4.00 per day.....	3,600
Total.....	\$4,200
Second Construction Year.....	\$4,200
Third Construction Year.....	\$4,200
Division of Drilling and Production	
Pre-Construction Period	
Superintendent 90 days at \$5.00 per day.....	\$450
Assistant Superintendents 450 days at \$4.00 per day....	1,800
Total.....	\$2,250
[fol. 8442]	
Division of Drilling and Production	
First Construction Year	
Superintendent 180 days at \$5.00 per day.....	\$900
Assistant Superintendents 900 days at \$4.00 per day....	3,600
Total.....	\$4,500
Second Construction Year.....	\$4,500
Third Construction Year.....	\$4,500
Division of Safety and Medical Examination	
Pre-Construction Period	
Supervisor	
Engineers and Examiners, 40 days at \$4.00 per day.....	\$160
Personnel man, 15 days at \$4.00 per day.....	75
Total.....	\$220

## Defendant's Exhibit No. 28—Continued

## First Construction Year

Supervisor, 120 days at \$5.00 per day.....	\$600
Chief Examiner, 180 days at \$4.00 per day.....	720
Assistant Examiners, 1200 days at \$4.00 per day.....	4,800
Engineers, 900 days at \$4.00 per day.....	3,600
Personnel man, 120 days at \$4.00 per day.....	480

Total.....\$10,200

Second Construction Year.....\$10,200

Third Construction Year.....\$10,200

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## Communication Expense—By Periods

## Office of General Superintendent

## Pre-Construction Period

Telephone—3 for 6 months at \$6.60 per month.....	\$119
Telegrams and Tolls, \$10.00 per day for 150 days.....	1,500

Total.....\$1,619

[fol. 8443]

## Communication Expense—By Periods

## Office of General Superintendent

## First Construction Year

Telephones—3 for 12 months at \$6.60 per month.....	\$238
Telegrams and Tolls \$15.00 per day for 300 days.....	4,500

Total.....\$4,738

Second Construction Year.....\$4,738

Third Construction Year.....\$3,238

## Division of Pipe Line Construction

## Pre-Construction Period

Telephones—2 for 3 months at \$6.60 per Month.....	\$40
Telegrams and Tolls, \$5.00 per day for 75 days.....	375

Total.....\$415

## Defendant's Exhibit No. 28—Continued

## First Construction Year

Telephones—2 for 12 months at \$6.60 per Month.....	\$158
Telegrams and Tolls, \$10.00 per day for 300 days.....	3,000

Total.....	<u>\$3,158</u>
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Second Construction Year.....	<u>\$3,158</u>
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Third Construction Year.....	<u>\$1,658</u>
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## Division of Compressor Station Construction

## Pre-Construction Period

Telephones—2 for 4 months at \$6.60 per month.....	\$53
Telegrams and Tolls, \$10.00 per day for 100 days.....	1,000

Total.....	<u>\$1,053</u>
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## First Construction Year

Telephones—2 for 12 months at \$6.60 per month.....	\$158
Telegrams and Tolls, \$10.00 per day for 300 days.....	3,000

Total.....	<u>\$3,158</u>
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Second Construction Year.....	<u>\$3,158</u>
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[fol. 8444]

## Division of Telephone Line Construction

## Pre-Construction Period

Telephones—2 for 3 months at \$6.60 per month.....	\$40
Telegrams and Tolls, \$5.00 per day for 75 days.....	375

Total.....	<u>\$415</u>
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## First Construction Year

Telephones—2 for 12 months at \$6.60 per month.....	\$158
Telegrams and Tolls \$3.00 per day for 300 days.....	900

Total.....	<u>\$1,058</u>
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Second Construction Year.....	<u>\$1,058</u>
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Third Construction Year.....	<u>\$1,058</u>
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## Division of Plant and Equipment

## Pre-Construction Period

Telephones—2 for 3 months at \$6.60 per month.....	\$40
Telegrams and Tolls, \$3.00 per day for 75 days.....	225

Total.....	<u>\$265</u>
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## Defendant's Exhibit No. 28—Continued

## First Construction Year

Telephones—2 for 12 months at \$6.60 per month.....	\$158
Telegrams and Tolls, \$3.00 per day for 300 days.....	900

Total.....	<u>\$1,058</u>
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Second Construction Year.....	<u>\$1,058</u>
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Third Construction Year.....	<u>\$1,058</u>
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## Division of Drilling and Production

## Pre-Construction Period

Telephones for 6 months—2 at \$6.60 per month.....	\$79
Telegrams and Tolls, \$10.00 per day for 150 days.....	1,500

Total.....	<u>\$1,579</u>
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## First Construction Year

Telephones—2 for 12 months at \$6.60 per month.....	\$158
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[fol. 8445]

## Division of Drilling and Production

## First Construction Year

Telegrams and Tolls, \$10.00 per day for 300 days.....	\$3,000
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Total.....	<u>\$3,158</u>
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Second Construction Year.....	<u>\$3,158</u>
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Third Construction Year.....	<u>\$3,158</u>
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## Division of Safety and Medical Examination

## Pre-Construction Period

Telephones—2 for 1 month at \$6.60 per month.....	\$13
Telegrams and Tolls, \$3.00 per day for 25 days.....	75

Total.....	<u>\$88</u>
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## First, Second and Third Construction Year

Telephones—2 for 12 months at \$6.60 per month.....	\$158
Telegrams and Tolls, \$5.00 per day for 300 days.....	1,500

Total.....	<u>\$1,658</u>
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## Office Furniture and Fixtures as per Detailed Inventory

Office of General Superintendent.....	\$1,229
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### Defendant's Exhibit No. 28—Continued

Waiting Room and Office of Chief Clerk, Assistant Chief Clerk, and five Stenographers assisting General Superintendent.....	\$2,062
Office of Superintendent of Pipe Line Division.....	211
Office of Two Clerks and Two Stenographers Assisting Superintendent of Pipe Line Division.....	750
Office of Superintendent of Compressor Stations.....	256
Office of One Clerk, One Draftsman, and Two Stenographers Assisting Superintendent of Compressor Stations.....	720
Office of Superintendent of Telephone Division.....	211
Office of One Clerk and One Stenographer Assisting Superintendent of Telephone Division.....	366
Office of Superintendent of Safety and Personnel Division.....	211
Office of Two Clerks and Three Stenographers Assisting Superintendent of Safety and Personnel Division.....	948
Office of Superintendent of Automotive Equipment Division.....	211

[fols. 8446-8449]

Office of Two Clerks and One Stenographer Assisting Superintendent of Automotive Equipment Division...	1,184
Office of Superintendent of Production Division.....	566
Office of One Clerk and one Stenographer Assisting Superintendent of Production Division.....	384

Total.....	\$9,309
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[fols. 8450-8458] Lone Star Gas Company

#### Appraisal

#### Cost of Reproduction New

January 1, 1933

#### Public Service Plant, Property and Business

#### Exclusive of Fort Worth Division

P. McDonald Biddison, E. A. Steinberger, Ed. C. Connor,  
Engineers, Dallas, Texas

[fol. 8459] The Relation Between Interest and Taxes During Construction and Fixed Charges on Inactive Plant (in Operation) During the Construction and Development Periods

[fol. 8460] In the preparation of this estimate of the reproduction cost of the property and business of Lone Star Gas

Company as of January 1, 1933, a careful study has been made of a hypothetical construction program, covering three years of actual construction that would conform to the logical process of placing the constructed plant in position to serve the center of gravity of the existing market at the earliest practical date. In the subsequent development of the estimates of the cost of Interest During Construction, Taxes During Construction, and the Cost of Business Development, effect has been given to the attachment of markets concurrently with the completion of the various sections of the physical property that would grow out of the application of the plan adopted.

The application of this plan to the estimate of the cost of the fixed charges, interest, taxes, and depreciation during the construction period, had the practical effect of reducing the estimated cost of Interest and Taxes during Construction substantially below the charges that would normally be estimated for these items in reproduction cost appraisals wherein less care had been exercised in determining the time at which specific markets would be attached as the section of the system when completed would pass from construction to operation.

Interest on the sum of money represented by advances for construction and all other expenses attributable to property under construction before the "coming into service" of the property under construction is a capital expense recognized by all regulatory bodies, and provision has been made for its capitalization in all standard uniform classification [fol. 8461] of accounts. The same is true of the cost of taxes (except certain special benefit assessments) levied on property under construction.

There is an extremely close relation between the cost of Interest and Taxes During Construction and the cost of interest, taxes and depreciation on that portion of the plant under construction that would come into service during the construction period, but that would, by reason of the inherent characteristics of the business, fail to be fully operative during a substantial period of time following the initiation of service. This relation will be developed in the subsequent analyses.

If the definition of Interest and Taxes During Construction used by the Interstate Commerce Commission and generally adopted for uniform classifications of accounts for



public utilities is interpreted to mean (and it is so interpreted) that interest and taxes cease to be proper capital charges as Interest During Construction and Taxes During Construction the instant of the "coming into service" of the property without regard to the extent of the use of the property at the time of its coming into service measured by its ultimate use, then it is obvious that some substitute capital charges must be provided to cover the accruals of fixed charges on inactive property during the period of business development in order to prevent substantial capital losses in properties subject to public regulation.

This fact can be clearly demonstrated by means of a comparative analysis of two assumed conditions, the second assumption being typical of actual conditions that would be met in the reproduction of any large natural gas pipe line system serving a large number of domestic consumers.

[fol. 8462]

## Assumption No. 1

Pre-construction Period .....	Six Months
Construction Period .....	Three Years
Cash requirements for construction and other expenses	
Pre-construction Period .....	5.00 Per Cent of total
First construction Year .....	40.00 Per Cent of total
Second construction Year .....	30.00 Per Cent of total
Third construction Year .....	25.00 Per Cent of total
Interest rate .....	8.00 Per Cent per Annum
Taxes .....	2.00 Per Cent per Annum

For simplicity of calculation, it will be assumed that the cash requirements will be secured at the beginning of each period, and that no earnings on unexpended balances would be credited to the interest account.

If it is further assumed that no portion of the property would become operative, or come into service until the end of the construction period, the calculation for Interest During Construction would be as follows:

5.00 Per Cent of total for 3.50 years at 8 Per Cent	= 1.40%
40.00 Per Cent of total for 3.00 years at 8 Per Cent	= 9.60%
30.00 Per Cent of total for 2.00 years at 8 Per Cent	= 4.80%
25.00 Per Cent of total for 1.00 year at 8 Per Cent	= 2.00%

Total Interest Charges on Total Expenditures 17.80%

In the case of Taxes During Construction the results of the calculation would depend upon the date at which construction is assumed to begin. For simplicity of calculation, it will be assumed that the construction period would begin July 1 of the Calendar year. Under this assumption, the calculated Taxes During Construction would be as follows:

25.00 Per Cent of total for 3.00 years at 2 Per Cent = 1.50%  
 60.00 Per Cent of total for 2.00 years at 2 Per Cent = 2.40%  
 87.50 Per Cent of total for 1.00 year at 2 Per Cent = 1.75%

Total Taxes on Total Expenditures ..... 5.65%

[fol. 8463] The calculations for both Interest During Construction and Taxes During Construction are shown in graphic form as Graphic Illustration of the Application of Interest During Construction—Assumption No. 1, and Graphic Illustration of the Application of Taxes During Construction—Assumption No. 1.

#### Assumption No. 2

Pre-construction Period ..... Six Months  
 Construction Period ..... Three Years  
 Cash requirements for construction and other expenses

Pre-construction Period .....	5.00 Per cent of Total
First construction Year .....	40.00 Per cent of total
Second construction Year .....	30.00 Per cent of total
Third construction Year .....	25.00 Per cent of total
Interest rate .....	8.00 Per cent per Annum
Taxes .....	2.00 Per cent per Annum
Depreciation (average) .....	5.00 Per cent per Annum
Per cent of plant in service at end of	
First Construction Year .....	40.00 Per cent of total
Per cent of plant in service at end of	
Second Construction Year .....	75.00 Per cent of total
Per cent of plant in service at end of	
Construction Period .....	100.00 Per cent of total
Per cent of plant inactive during	
Second Construction Year .....	85.00 Per cent of total
Per cent of plant inactive during	
Third Construction Year .....	65.00 Per cent of total

Inasmuch as only forty per cent of the total plant has been assumed to have passed into service at the end of the first

construction year, the percentage of the total plant inactive during the second construction year, in terms of plant in service, would be forty per cent minus fifteen per cent, or twenty five per cent of the total plant.

Inasmuch as only seventy five per cent of the total plant has been assumed to have passed into service at the end of the second construction year, the percentage of the total [fol. 8464] plant inactive *inactive* during the third construction year, in terms of plant in service would be seventy five per cent minus thirty five per cent, or forty per cent of the total plant. Under the conditions outlined in Assumption No. 2, the calculation for Interest During Construction would be as follows:

5.00 Per cent of total for 1.50 years at 8 per cent =	.60%
40.00 Per cent of total for 1.00 year at 8 per cent =	3.20%
35.00 Per cent of total for 1.00 year at 8 per cent =	2.80%
25.00 Per cent of total for 1.00 year at 8 per cent =	2.00%

---

Total Interest Charges on Total Expenditures 8.60%

The calculation for Taxes During Construction upon the assumption that construction would begin July 1, of the Calendar year would be as follows:

25.00 Per cent of total for 1.00 year at 2 per cent =	.50%
20.00 Per cent of total for 1.00 year at 2 per cent =	.40%
12.50 Per cent of total for 1.00 year at 2 per cent =	.25%

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Total Taxes on Total Expenditures . . . . . 1.15%

The calculations for both Interest During Construction and Taxes During Construction are shown in graphic form as Graphic Illustration of the Application of Interest During Construction—Assumption No. 2, and Graphic Illustration of the Application of Taxes During Construction—Assumption No. 2.

It has been previously determined for Assumption No. 2 that for the portion of the plant "passing into service" at the beginning of the second construction year, such a proportion would be inactive compared to ultimate domestic use, as to be equal to twenty five per cent of the total plant. For the portion of the plant passing into service at the beginning of the third construction year, together with the portion that passed into service during the previous year,

such a portion would be inactive, compared to ultimate domestic use, as to equal forty per cent of the total plant.

[fol. 8465] These percentages were determined by the application of the normal percentage of the ultimate customer saturation and customer use (domestic basis) that would be required during the first and second year of natural gas service to the per cent of the total plant in service in the second and third construction years.

Therefore, for the second and third construction years, there would be an aggregate of sixty five per cent of the total plant that would be inactive (one year basis) and upon which no charges for interest and taxes during construction would be set up as capital items under the accepted definition of these items.

This situation is set out in graphic form as Graphic Illustration of the Relation of Inactive Plant to Plant in Service, Construction Period Only—Assumption No. 2.

It will be clear from the foregoing analyses that unless some provision is made in the reproduction cost estimate to cover the fixed charges, which in the case of operative property include depreciation as well as taxes and interest, on his proportionate part of the cost of the total property which has passed from construction into service but which in reality is operative only to a limited degree, then the estimate to this extent fails to reflect the actual reproduction cost.

The proper calculations to cover this cost (construction period only) under the conditions set out in Assumption No. 2 are as follows:

#### Second Construction Year

Interest .....	8 Per cent of 25 per cent—one year = 2.00 Per cent.
Taxes .....	2 Per cent of 25 per cent—one year = .50 Per cent.
Depreciation .....	5 Per cent of 25 per cent—one year = 1.25 Per cent.

[fol. 8466]

#### Third Construction Year

Interest .....	8 per cent of 40 per cent—one year = 3.20 per cent.
Taxes .....	2 per cent of 40 per cent—one year = .80 per cent.
Depreciation .....	5 per cent of 40 per cent—one year = 2.00 per cent.

Fixed Charges on Total Expenditures\*..... 9.75 per cent.

\* Theoretically in service but actually inactive during the construction period.

The discussion up to this point has dealt with the fixed charges upon the proportionate part of the total plant that would have passed into service, but that would have been

inactive during the construction period only. The same methods and the same reasoning would apply to the proportionate part of the total plant that would be in service, but partially inactive during the years immediately following the completion of construction. The ratio of the inactive plant to the total plant would decrease by successive steps as the business existing at the date of the reproduction cost estimate would gradually be acquired. However, the fixed charges, interest, taxes and depreciation, on the inactive portion of the total plant during this time would be an inescapable part of the cost of reproduction, and should therefore be made a part of any estimate that fully reflects the actual costs that would be encountered in reproduction.

In fixing the estimated amounts for the closely inter-related elements of cost, interest and taxes on property wholly in construction and interest, taxes and depreciation on the inactive part of plant in service during the construction and development periods, care should be exercised to avoid any hypotheses or assumptions that would not conform to the logical processes of construction and business acquisition applicable to the particular property being appraised.

[fol. 8467] As stated at the beginning of these analyses, and as will be developed in the detailed estimates of the cost of Interest During Construction, the cost of Taxes During Construction, and the cost of Business Development in the subsequent sections of the appraisal, the conditions assumed conform as nearly as is practicable in a reproduction cost estimate to the conditions that would be met in the reproduction of the property and business of Lone Star Gas Company as of January 1, 1933.

In concluding this general discussion preliminary to the detailed estimates of the costs of the fixed charges that are included in the subsequent section of the report, consideration will be given to certain basic factors that have a direct bearing upon the methods employed.

A natural gas pipe line system, with the exception of certain items that constitute a relatively small proportion of the system as a whole, should be initially designed and constructed to meet the anticipated demands of the market served. The use of such a program would necessarily result in a substantial part of the constructed system being inactive during the period in which the anticipated demands of the market were being developed. This condition would be emphasized where the anticipated demands would be, in



a large measure, the cumulative demands of a large number of individual domestic consumers.

The ultimate cost of such a program, after giving full effect to the proper capitalization of the fixed charges on the inactive portion of the system during the period of business acquisition, would be substantially less than the ultimate cost of a system built by the installation of units of [fol. 8468] property commensurate with the existing demand at the date of installation. A specific example will clarify this statement.

Under similar conditions the cost installed of steel pipe four inches in diameter would be approximately one fourth the cost installed of steel pipe sixteen inches in diameter. The delivery capacity of the four inch pipe with equal length of line and equal intake and discharge pressures for each size pipe, would be approximately one thirty fifth the delivery capacity of the sixteen inch pipe. There is little variation from the rule that the installed cost of steel pipe increases directly with diameter increase, while the delivery capacity increases with the 2.667th power of the diameter increase.

On account of this basic engineering fact, natural gas pipe line systems serving large domestic markets are constructed with initial capacities largely in excess of initial demands and reproduction cost estimates that reflect normal conditions must give effect to this fact.

Initial domestic rates for natural gas service could not be fixed at a price that would yield the pipe line company interest, taxes and depreciation above the variable operating charges on the cost of those portions of the property "passing into service" with only a relatively small proportion of their capacity absorbed by the demands of the service. High initial rates would discourage use and delay the date of ultimate saturation. For this reason, the domestic rates assumed in the appraisal are identical with domestic rates in force at the date of the appraisal and the loss of fixed charges on the proportionate part of the plant estimated to be inactive at the various stages of the development period has not been adjusted to give effect to any [fol. 8469] modified rate schedules.

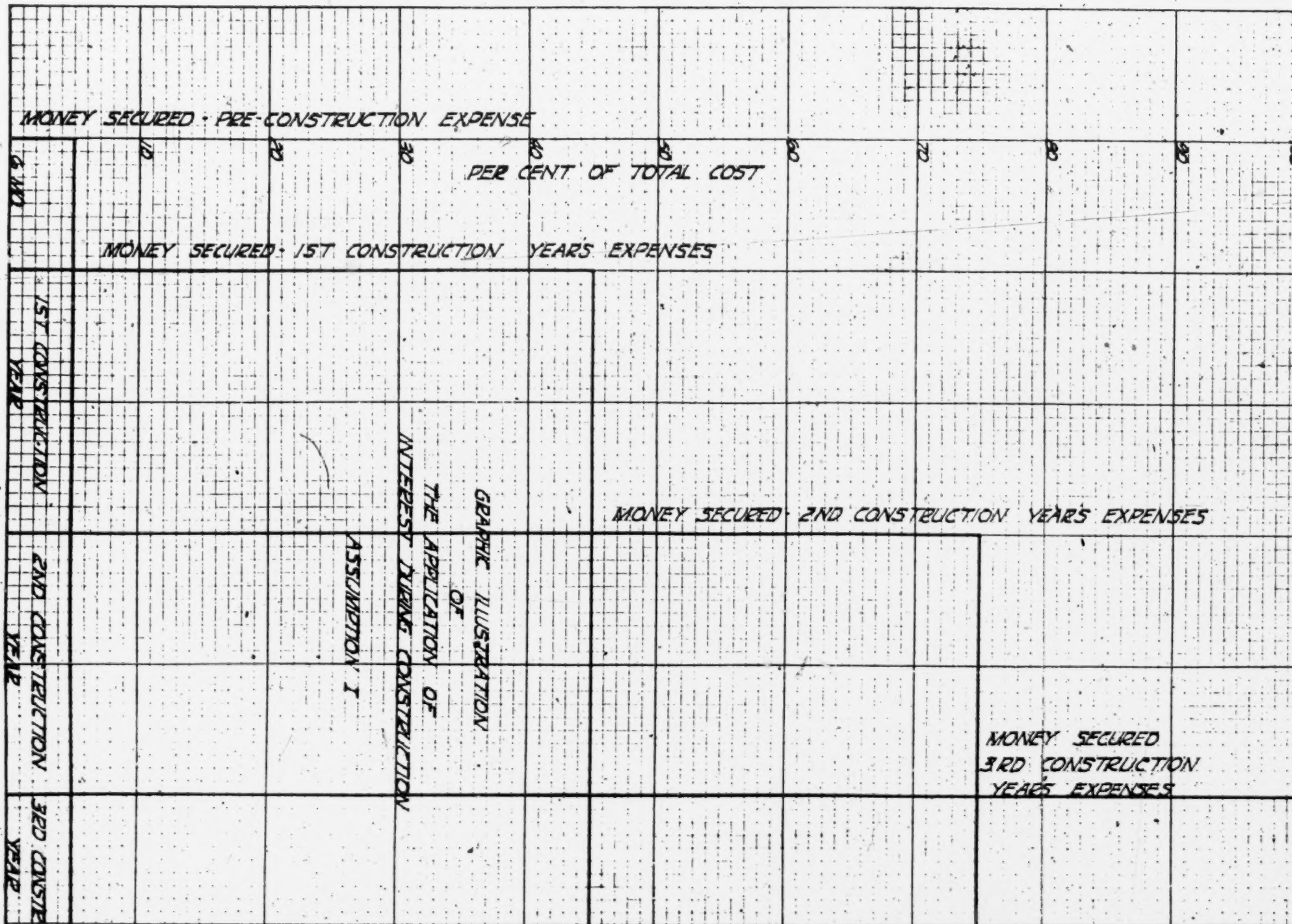
(NOTE.) All percentages used in the calculations are hypothetical and have been assumed for the purpose of illustration and ease of calculation.

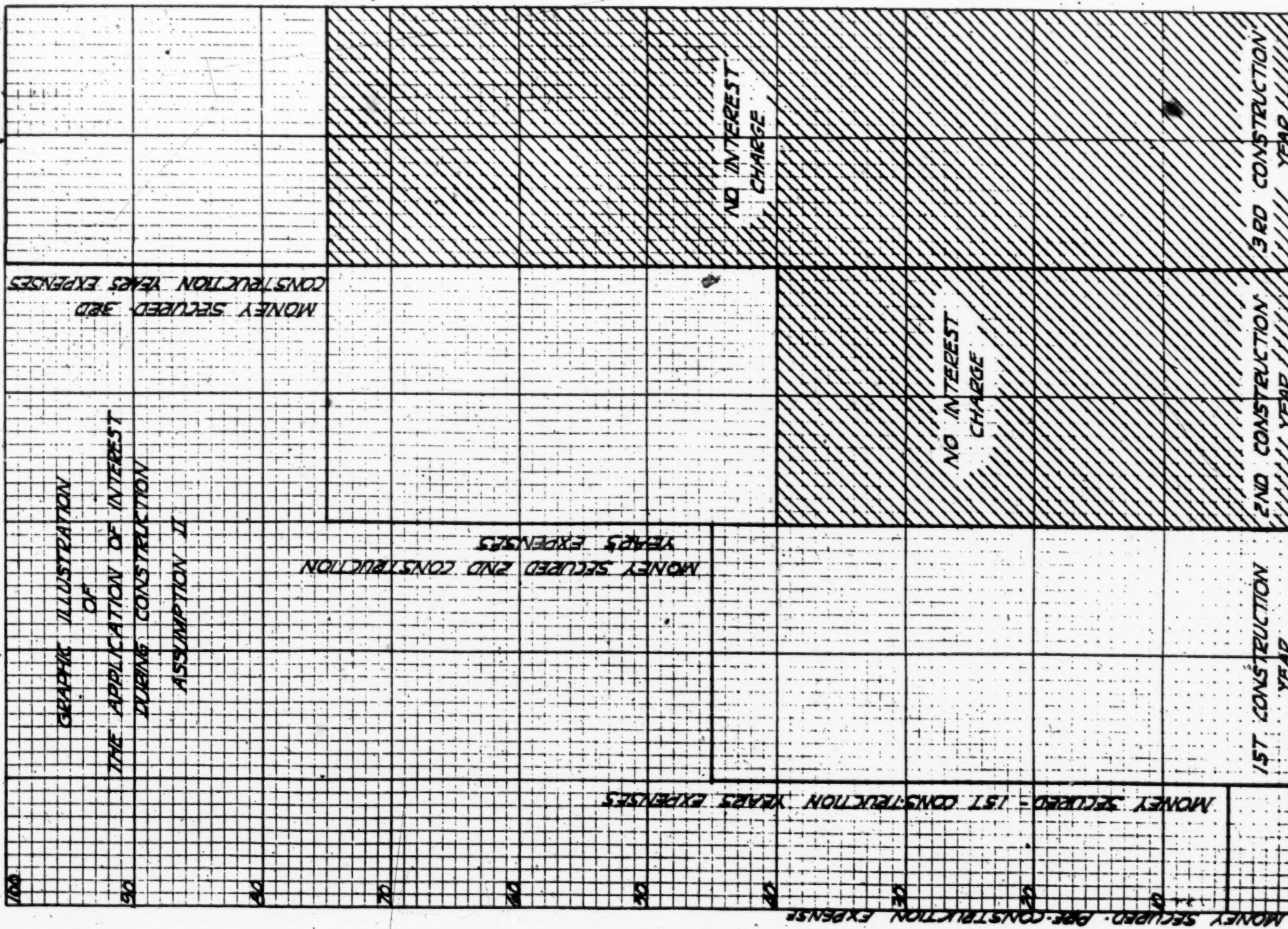


.(Here follows 5 photolithographs, side folios 8470-8474)

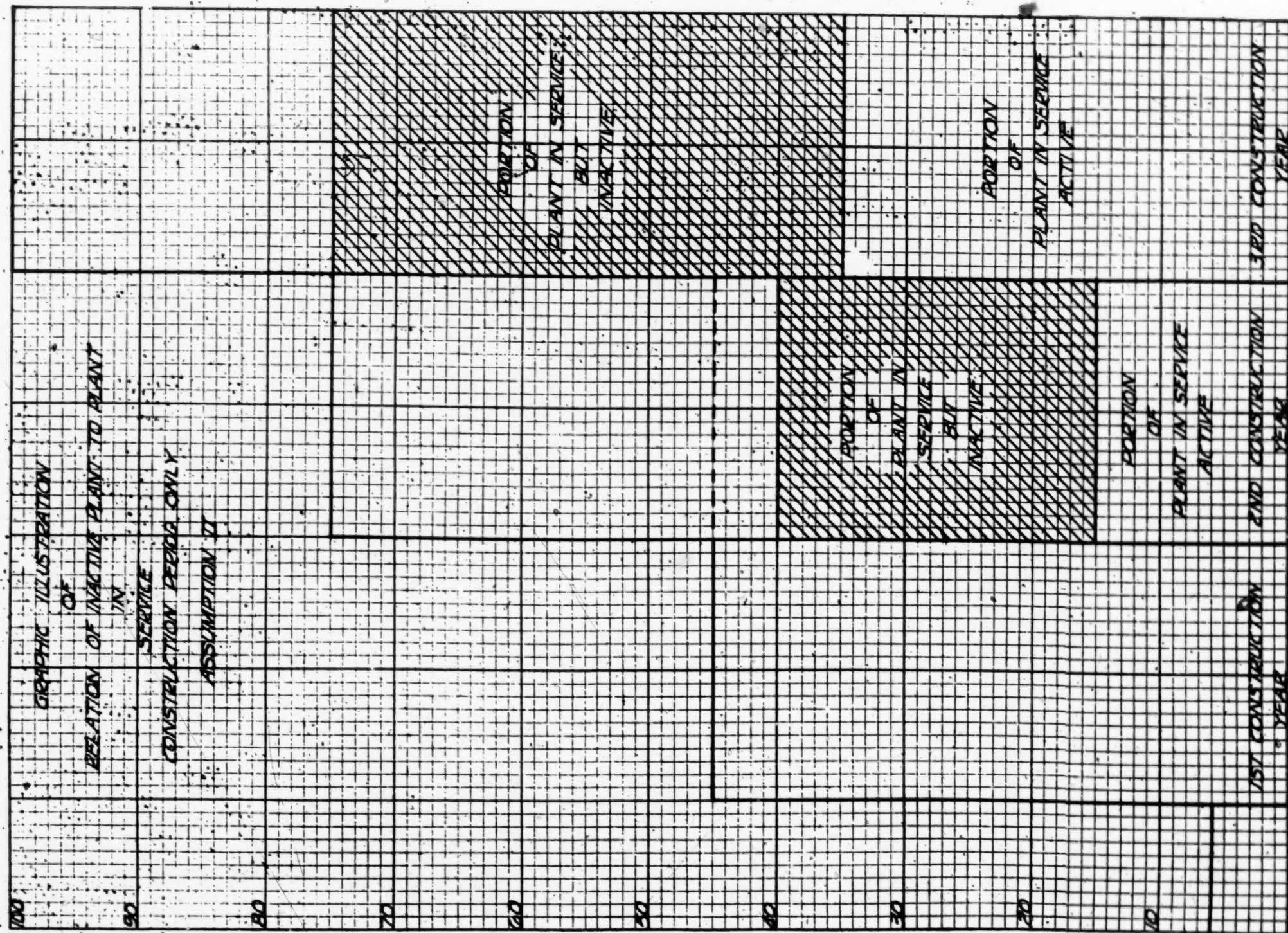
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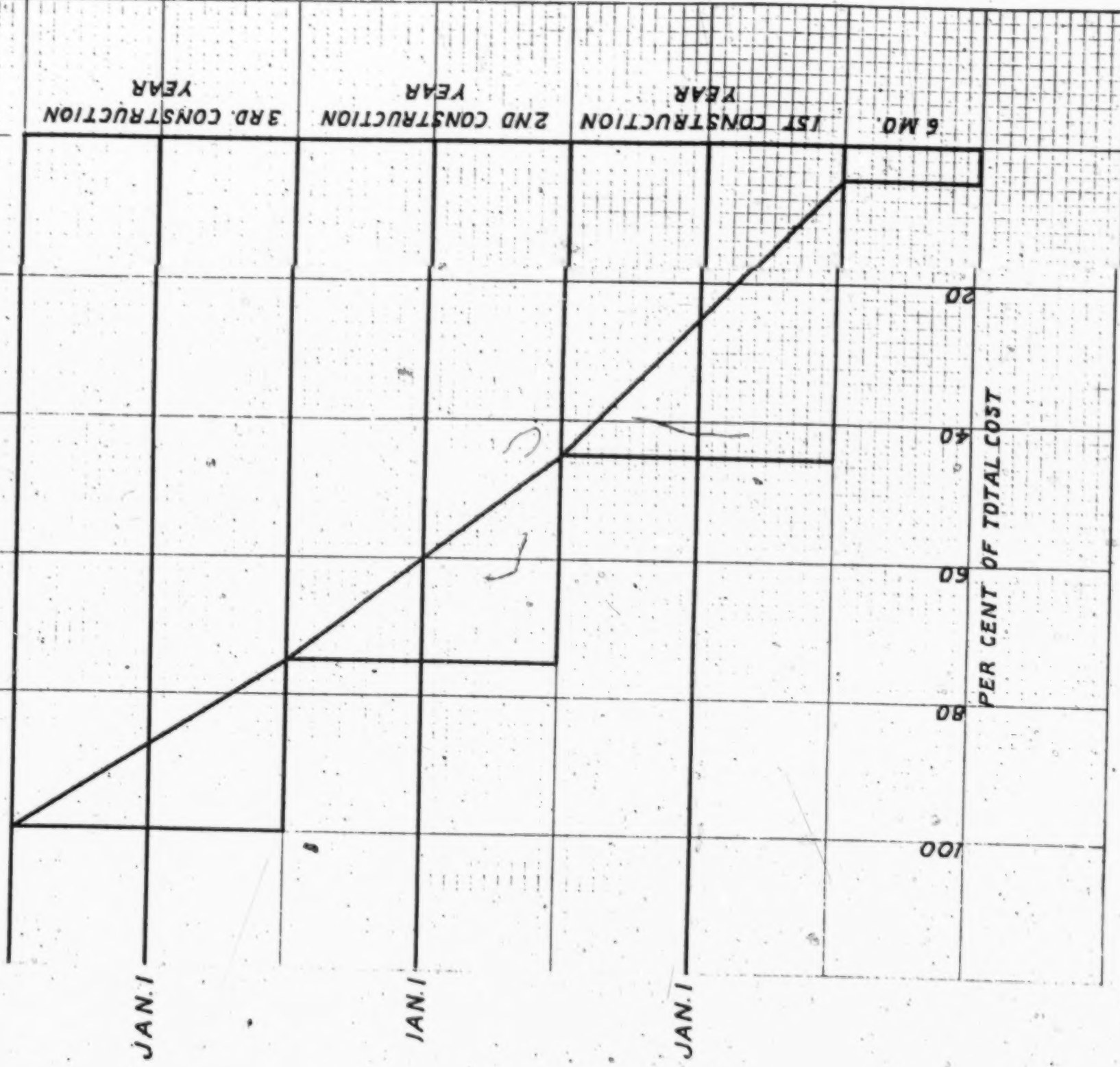






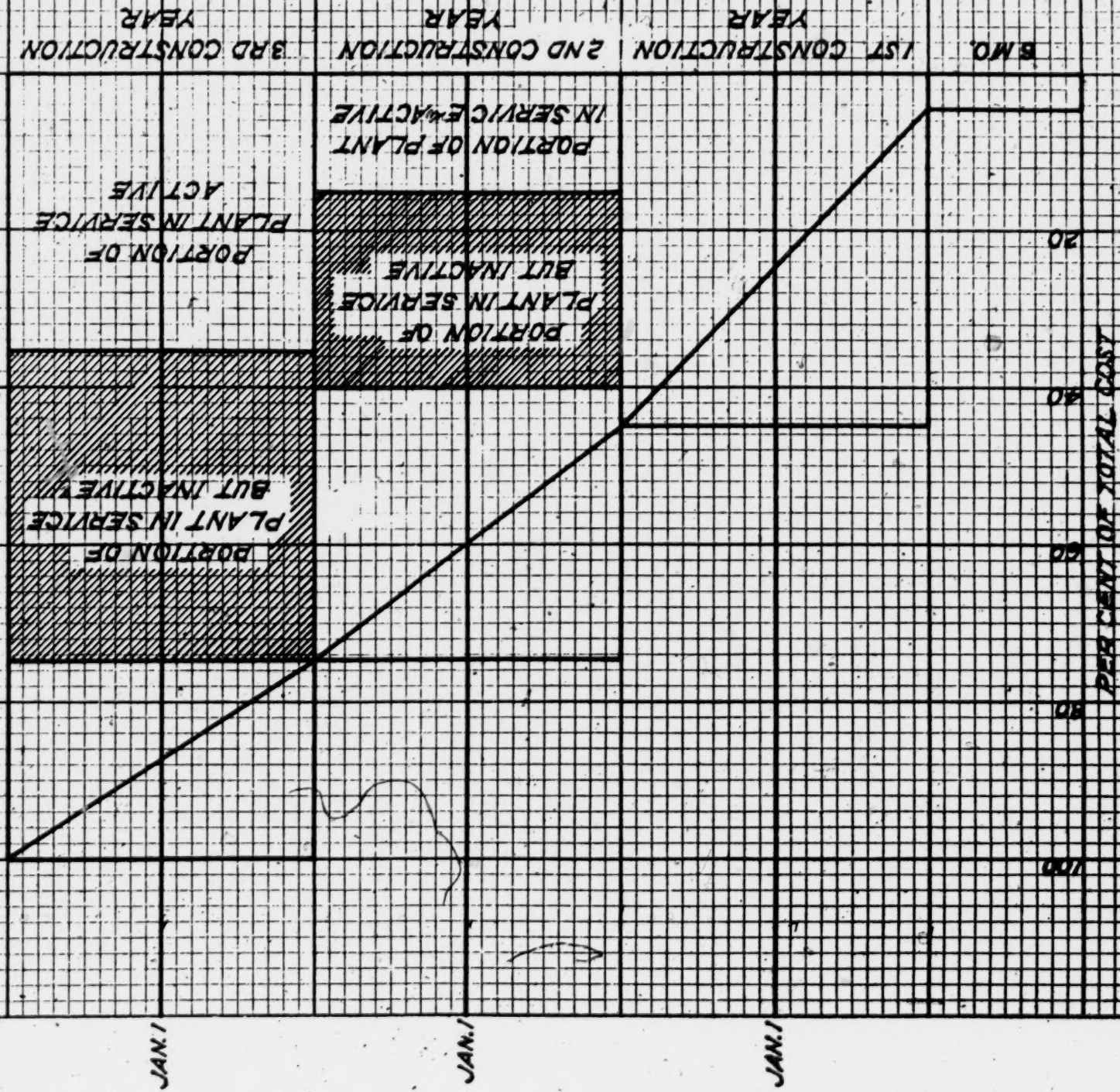


GRAPHIC ILLUSTRATION  
OF  
THE APPLICATION OF TAXES  
DURING CONSTRUCTION  
ASSUMPTION I.





GRAPHIC ILLUSTRATION  
OF  
THE APPLICATION OF TAXES  
DURING CONSTRUCTION.  
ASSUMPTION II



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[fols. 8475-8478] Expenditures by Periods

[fol. 8479] In order to arrive at an estimate of the cost of Taxes During Construction, Interest During Construction, and Fixed Charges on Idle Plant, three basic determinations must be made.

1. The amount of expenditures that would be made in the reproduction of Lone Star Gas Company During the Pre-Construction Period, and during each of the construction years
2. The proper classification of these expenditures by investment accounts
3. The proportionate amount of the total reproduction cost that would pass into service during the construction period

It has been previously stated that in the preparation of this estimate, a careful study has been made of logical construction program that would be followed in reproduction. The essential details of the hypothetical construction program that was developed as a result of this study are shown in the three maps which for convenience and reference, are again introduced into the body of the report.

The estimated reproduction cost of each element of the physical property included in the program for each year has been set out in detail and made a part of the construction cost for each year. In this section of the report which deals strictly with Preliminary Development and Organization Costs, Undistributed General Costs, and Going Value, the costs attributable to the various undistributed expenses have been properly allocated to the Pre-Construction period, and the construction years.

With reference to the various items of physical property, the major items, the reproduction cost of transmission, tap and gathering lines and equipment, and compressor stations, equipment and land, have been analyzed in detail and the [fol. 8480] proportionate amount allocated to each construction year in conformity with the construction program. Other items such as the value of gas leases and reserves, and the reproduction cost of gas well construction and equipment have, insofar as that portion of the reproduction cost is attributable to the construction period, been equally divided

between the three years. This allocation is in conformity with the normal procedure that would occur in reproduction.

Of the general costs, marketing costs have been allocated to each period in proportion to the total expenditures in each period.

The necessity for the classification of these expenditures by investment accounts grows out of the fact that while Interest During Construction would be fixed by the date and the amount of expenditures without reference to their classifications, Taxes During Construction would accrue largely upon the basis of the cost of the physical property installed as distinguished from concurrent expenditures for Undistributed General Costs.

The necessity for the determination of the proportionate amount of the total reproduction cost that would pass into service at intervals during the construction period grows out of the fact that both Taxes During Construction and Interest During Construction would cease insofar as the property items passing into service were concerned, and would be superseded by the corresponding charges on the portion of this plant in service but inactive or idle during the period of business development.

It will be noted from an inspection of the schedule that all Preliminary Development and Organization Costs, with the exception of the marketing costs of securities are estimated [fol. 8481] to have been incurred in the Pre-Construction Period, and that certain other capital expenditures as the cost of the General Office Land and General Office Structure have also been ascribed to the same period. These expenditures would be an essential part of the cost of the system as a whole. For this reason, in fixing the reproduction cost of the property going into service at the end of the First Construction Year, and at the end of the Second Construction Year, the costs incurred in the Pre-Construction Period have been allocated and added to these construction period costs in proportion to the total costs incurred in the First and Second Construction Periods respectively, to the total costs incurred during the entire construction period.

From the Schedule of Expenditures by Periods, the following determinations have been made:

#### Taxes During Construction

After deducting from Direct Structural Costs the items included in the Pre-Construction Period on which taxes have



been included in Other General Costs, the taxable expenditures were found to be as follows:

Pre-Construction Period .....	\$3,049,057
Construction Period—First Year .....	20,519,270
Construction Period—Second Year .....	17,485,239
Construction Period—Third Year .....	9,128,368
<b>Total .....</b>	<b>\$50,181,934</b>

These amounts have been used in the calculation of Taxes During Construction.

#### Interest During Construction

From the Schedule of Expenditures by Periods, including the distributed calculation of Taxes During Construction, the [fol. 8482] total expenditures by periods was found to be as follows:

Pre-Construction Period .....	\$6,895,832
Construction Period—First Year .....	22,673,380
Construction Period—Second Year .....	19,326,719
Construction Period—Third Year .....	10,617,053
<b>Total .....</b>	<b>\$59,512,984</b>

In order to determine the amount of these expenditures that would pass into service at the end of the First and Second Construction Years, the following steps were taken:

1. The percentage of the total amount included in the construction period, \$52,617,152, was determined for the expenditures made in each construction year

22,673,380	
<hr/>	
52,617,152	43.09%
19,326,719	
<hr/>	
52,617,152	36.73%
10,617,053	
<hr/>	
52,617,152	20.18%

2. These percentages were then applied to the expenditures made in the Pre-Construction Period for the purpose of distributing these expenditures to the property going into service during the Construction Period.

The application of these percentages resulted as follows:

Pre-Construction expense attributable to First-Construction Year .....	\$2,971,414
Pre-Construction expense attributable to Second-Construction Year .....	2,532,839
Pre-Construction expense attributable to Third-Construction Year .....	1,391,579

The application of these calculations is shown in detail in Interest During Construction.

#### Fixed Charges on Idle Plant

As shown by the Schedule of Expenditures by Periods, the total reproduction cost of the property including Interest During Construction was found to be \$64,488,917, and the expenditures by periods as follows:

[fol. 8483] Pre-Construction Period .....	\$7,171,665
Construction Period—First Year .....	24,817,147
Construction Period—Second Year .....	21,012,426
Construction Period—Third Year .....	11,487,679
Total .....	<u>\$64,488,917</u>

In order to estimate the percentage of this total expenditure that would pass into service at the end of the First and Second Construction Periods, the following step was taken:

The sum of the expenditures during the three construction periods was:

24,817,147	
<hr/>	43.30%
57,317,252	
21,012,426	
<hr/>	36.66%
57,317,252	
11,487,679	
<hr/>	20.04%
57,317,252	

It is estimated that the above percentage of the total expenditures, \$64,488,917, would pass into service successively at the end of each construction period. The application of these calculations is shown in detail in the development of Fixed Charges on Idle Plant.



# Defendant's Exhibit No. 28—Continued

## Schedule of Distribution of Expenditures by Periods Direct Structural Costs

	Total Physical Property	Pre- Construction	Construction First Year	Construction Second Year	Construction Third Year
<b>Production System</b>					
Gas Wells.....	\$4,014,229	\$.....	\$.....	\$.....	\$.....
Other Structures.....	9,711	.....	.....	.....	.....
Other Production System Equipment (Drill Tools).....	98,350	1,079,555	1,014,245	1,014,245	1,014,245
<b>Gathering System</b>					
Rights-of-way.....	11,184	.....	.....	.....	.....
Field Measuring Station Structures.....	37,304	.....	.....	.....	.....
Field Measuring Station Equipment.....	130,223	.....	.....	297,710	91,998
Field Line Equipment.....	1,329,447	.....	1,118,450	.....	.....
Transmission System.....	34,096,799	.....	13,436,305	13,690,145	6,970,349
Compressor Stations.....	4,994,213	.....	3,684,088	1,310,125	.....
<b>General</b>					
General Office Land.....	44,545	44,545	.....	.....	.....
Other General Land.....	49,274	49,274	.....	.....	.....
General Office Structures.....	321,438	321,438	.....	.....	.....
Other General Structures.....	46,790	46,790	.....	.....	.....
[fol. 8485] General Office Furniture and Fixtures.....	207,602	147,086	.....	.....	60,516
Other General Furniture and Fixtures.....	12,060	.....	.....	.....	12,060
General Shop Equipment.....	104,000	104,000	.....	.....	.....
General Tools.....	131,550	.....	32,887	32,887	65,775
Automotive and Construction Equipment.....	423,718	.....	105,930	105,929	211,859
General Telephone System.....	370,464	.....	185,232	185,232	.....
Engineering Records.....	765,690	.....	346,302	253,136	166,252
Lands and Undeveloped Leases.....	893,291	446,645	148,882	148,882	148,882
Gas Reserves.....	2,681,689	1,340,845	446,948	446,948	446,948
<b>Total Physical Property.....</b>	<b>\$50,773,571</b>	<b>\$3,580,178</b>	<b>\$20,519,270</b>	<b>\$17,485,239</b>	<b>\$9,188,884</b>

\* \$39,944 of Production System Cost has been included as a part of preliminary development and Organization Costs.

# Defendant's Exhibit No. 28—Continued

[fol. 8486]

## Schedule of Distribution of Expenditures by Periods General and Undistributed Costs

	Total General and Undistributed Costs	Pre Construction	Construction First Year	Construction Second Year	Construction Third Year
<b>Preliminary Development and Organization Costs</b>					
Preliminary Geological Investigation.....	\$144,444	\$114,444	\$.....	\$.....	\$.....
Preliminary Engineering Investigation.....	49,695	49,695	.....	.....	.....
Detail Geological Work.....	78,420	78,420	.....	.....	.....
Fiscal Agent's Geological Check.....	15,000	15,000	.....	.....	.....
Fiscal Agent's Engineering Check.....	15,000	15,000	.....	.....	.....
Fiscal Agent's Title Certification.....	25,000	25,000	.....	.....	.....
Undistributed Production Expenses.....	39,944	39,944	.....	.....	.....
Organization and Corporate Expenses.....	141,769	141,769	.....	.....	.....
Marketing Costs—Preferred Stock.....	855,000	106,875	310,792	275,310	162,023
Marketing Costs—Mortgage Bonds.....	1,140,000	142,500	414,390	367,080	216,030
Remuneration of Originating Group.....	2,000,000	2,000,000	.....	.....	.....
<b>Administrative and Legal Costs</b>					
Executive Section.....	503,487	91,543	183,086	137,315	91,543
Legal Section.....	490,576	49,920	133,997	130,454	176,205
Accounting Section.....	192,320	14,927	66,460	54,526	56,407
Treasury Section.....	97,509	9,931	36,931	27,853	23,394

[fol. 8487]

Land Section.....	\$277,138	\$37,867	\$79,757	\$79,757	\$79,757
Geological Section.....	255,929	41,179	76,838	76,838	61,074
Purchasing Section.....	530,636	39,395	147,808	147,812	195,621
Other General Costs					
Office Building Costs.....	134,820	19,260	38,520	38,520	38,520
Fidelity Bonds.....	10,717	1,531	3,062	3,062	3,062
Compensation Insurance.....	9,487	1,357	2,710	2,710	2,710
Certification of Expenditures.....	35,000	5,000	10,000	10,000	10,000
Mail Clerks.....	11,550	1,650	3,300	3,300	3,300
Engineering Costs.....	1,127,661	251,684	435,207	303,156	137,614
Supervision Costs.....	414,493	22,363	131,210	131,210	129,710
Taxes During Construction*	173,818	.....	80,042	52,577	41,199
Interest During Construction**	4,975,933	275,833	2,143,767	1,685,707	870,626
Totals.....	<u>\$13,715,346</u>	<u>\$3,591,487</u>	<u>\$4,297,877</u>	<u>\$3,527,187</u>	<u>\$2,298,795</u>

\* Calculated in Taxes During Construction.

\*\* Calculated in Interest During Construction.

## Defendant's Exhibit No. 28—Continued

[fol. 8488] Detail of Reproduction Cost by Construction  
PeriodsTransmission, Tap and Gathering Lines and Compressor  
Stations

## [fol. 8489] Compressor Stations—First Year

Petrolia .....	\$1,056,638.41
Gas City .....	281,623.34
Fox Central .....	244,286.35
Joshua No. 1 & 2 .....	510,658.32
Caddo .....	261,986.25
Breckenridge .....	290,099.28
Ibex .....	249,130.72
Ranger No. 3 .....	291,650.92
Ranger No. 4 .....	165,904.20
Pueblo .....	87,367.65
Sipe Springs .....	182,576.20
General Supervision—Allocated .....	62,166.72
Total .....	<hr/> \$3,684,088.36

[fol. 8490] Detail of Reproduction Cost by Construction  
Periods

## Compressor Stations—Second Year

Fox-East .....	\$101,215.88
Loco .....	136,705.11
Brazos .....	89,622.32
X-Ray .....	69,240.16
Brad .....	162,192.74
Ranger No. 1 .....	128,855.56
Ranger No. 2 .....	113,004.96
Eastland .....	130,994.31
Alvord .....	14,504.68
Cheaney .....	137,093.05
Desdemona .....	77,229.85
Gainesville .....	76,295.28
Tiffin .....	51,066.71
General Supervision—Allocated .....	22,104.28
Total .....	<hr/> \$1,310,124.89

## Defendant's Exhibit No. 28—Continued

[fol. 8491] Detail of Reproduction Cost by Construction Periods

## Transmission, Tap and Gathering Lines

## Summary

## Year

System	First	Second	Third	Total
A.....	\$314,018.49	\$3,383,796.73	\$296,133.69	\$3,993,948.91
B.....	1,381,217.39	1,945,753.59	51,821.37	3,378,792.35
C.....	493,018.70	127,388.51	18,719.49	639,126.70
E.....	428,018.42	1,072,389.13	457,446.54	1,958,354.09
F.....		953,781.29	186,773.50	1,140,554.79
G.....	1,148,774.82	4,689.65	808,143.50	1,961,607.97
H.....	1,167,271.23	132.24	654,249.15	1,821,652.62
J.....	399,066.19	188,559.41		587,625.60
K.....	3,999,227.14	764,518.91	642,495.64	5,406,241.69
L.....	754,595.76	1,192,641.68	1,268,271.97	3,215,509.41
M.....		781,748.84	827,665.56	1,609,414.40
O.....	1,846,333.70	1,821,300.17	1,732,616.81	5,400,250.68
R.....		679,132.43		679,132.43
Numbered	1,454,622.32			1,454,622.32
U. S. Gov't.		1,036.37		1,036.37
T. P. U....		721,686.92		721,686.92
Totals.....	<u>\$13,386,164.16</u>	<u>\$13,639,055.87</u>	<u>\$6,944,337.22</u>	<u>\$33,969,557.25</u>

General Super- vision— Allocated	\$50,141.11	\$51,088.94	\$26,011.95	\$127,242.00
	<u>\$13,436,305.27</u>	<u>\$13,690,144.81</u>	<u>\$6,970,349.17</u>	<u>\$34,096,799.25</u>

[fol. 8492]

## Line

A.....	\$307,506.22	\$2,984,851.58		\$3,292,357.80
A-1.....			\$133,674.39	133,674.39
A-1-1.....			2,613.40	2,613.40
A-1-2.....			2,157.70	2,157.70
A-1-3.....			3,355.77	3,355.77
A-1-4.....			119,576.72	119,576.72
A-1-4-1.....			2,828.69	2,828.69
A-1-4-2.....			2,677.27	2,677.27
A-2.....			3,434.33	3,434.33
A-3.....			3,373.80	3,373.80
A-4.....			3,644.46	3,644.46
A-5.....			789.74	789.74
A-6.....			3,266.70	3,266.70
A-8.....			9,826.94	9,826.94
A-10.....			2,932.65	2,932.65
A-11.....			1,812.52	1,812.52
A-12.....	6,512.27			6,512.27
A-13.....		435.26		435.26
A-14.....		26,199.67		26,199.67
A-15.....			168.61	168.61
Madge Gin.		363.90		363.90
A-A.....		10,112.89		10,112.89
A-B.....		21,029.74		21,029.74
A-B-A.....		12,501.10		12,501.10
A-C.....		23,792.68		23,792.68
A-C-A.....		29,121.78		29,121.78

## Defendant's Exhibit No. 28—Continued

Line	Year			Total
	First	Second	Third	
A-C-B.....		\$6,897.18		\$6,897.18
A-D.....		18,517.37		18,517.37
A-E.....		14,190.08		14,190.08
A-F.....		39,817.58		39,817.58
A-F-A.....		11,908.51		11,908.51
A-F-A-A.....		5,262.04		5,262.04
A-F-B.....		8,727.42		8,727.42
A-F-C.....		13,389.74		13,389.74
A-G.....		27,584.40		27,584.40
A-H.....		42,327.34		42,327.34
A-J.....		22,537.18		22,537.18
A-K.....		53,827.94		53,827.94
A-K-A.....		10,401.35		10,401.35
Totals.....	\$314,018.49	\$3,383,796.73	\$296,133.69	\$3,993,948.91
[fol. 8493]				
B.....	\$1,366,347.97			\$1,366,347.97
B-1.....			\$5,470.39	5,470.39
B-2.....		\$9,822.16		9,822.16
B-3.....			5,523.09	5,523.09
B-4.....			4,657.26	4,657.26
B-5.....		4,805.20		4,805.20
B-6.....			3,285.88	3,285.88
B-7.....	14,869.42			14,869.42
B-8.....		30,664.62		30,664.62
B-9.....		20,041.59		20,041.59
B-9-1.....			4,815.82	4,815.82
B-10.....			3,586.42	3,586.42
B-11.....			4,174.68	4,174.68
B-12.....		9,828.52		9,828.52
B-13.....			20,307.83	20,307.83
Holloway				
Line.....		3,968.62		3,968.62
2nd B.....		1,866,622.88		1,866,622.88
Totals.....	\$1,381,217.39	\$1,945,753.59	\$51,821.37	\$3,378,792.35
[fol. 8494]				
C.....	\$493,018.70			\$493,018.70
2nd C.....		\$84,882.26		84,882.26
C-1.....			\$2,055.32	2,055.32
C-2.....		42,506.25		42,506.25
C-5.....			13,928.48	13,928.48
C-5-1.....			965.00	965.00
C-7.....			1,770.69	1,770.69
Totals.....	\$493,018.70	\$127,388.51	\$18,719.49	\$639,126.70
[fol. 8495]				
E.....	\$333,335.34	\$783,365.98		\$1,116,701.32
E-1.....	23,627.74			23,627.74
E-1-A.....			\$14,983.78	14,983.78
2nd E-1-A.....			33,867.97	33,867.97
E-2.....	55,871.47			55,871.47
E-3.....		5,377.00		5,377.00
E-4.....		7,981.25		7,981.25
E-5.....		98,233.93	54,019.53	152,253.46



## Defendant's Exhibit No. 28—Continued

B  
Year

Line	First	Second	Third	Total
E-5-1.....			\$2,033.05	\$2,033.05
E-5-2.....		\$3,512.43		3,512.43
E-6.....		6,726.02		6,726.02
E-7.....		6,661.77		6,661.77
E-8.....			7,096.88	7,096.88
E-9.....	\$15,183.87			15,183.87
E-10.....			128,340.40	128,340.40
E-10-1.....			4,259.40	4,259.40
E-10-2.....			2,881.14	2,881.14
E-10-3.....			16,717.95	16,717.95
E-10-4.....			8,259.65	8,259.65
E-10-5.....			35,073.16	35,073.16
E-10-5-1.....			2,089.74	2,089.74
E-10-6.....			18,913.50	18,913.50
E-10-6-1.....			1,472.44	1,472.44
E-10-7.....			1,350.22	1,350.22
E-11.....			11,709.41	11,709.41
E-12.....			2,122.97	2,122.97
E-13.....			4,119.21	4,119.21
E-14.....			17,513.29	17,513.29
E-15.....			16,431.69	16,431.69
E-16.....		156,845.07		156,845.07
E-17.....			11,548.39	11,548.39
E-18.....		4,185.68		4,185.68
E-19.....			2,513.89	2,513.89
E-20.....			2,767.09	2,767.09
E-21.....			1,935.85	1,935.85
E-22.....			40,497.78	40,497.78
E-22-1.....			11,023.10	11,023.10
E-22-2.....			3,905.06	3,905.06
Totals.....	\$428,018.42	\$1,072,889.13	\$457,446.54	\$1,958,354.09

[fol. 8496]

F.....		769,791.81		769,791.81
F-1.....		16,733.16		16,733.16
F-2.....		149,578.71		149,578.71
F-2-1.....			\$27,213.57	27,213.57
F-2-1-1.....			795.77	795.77
F-2-2.....			14,878.95	14,878.95
F-2-3.....			27,004.08	27,004.08
F-5.....			2,743.27	2,743.27
F-6.....			1,698.62	1,698.62
F-7.....			11,342.78	11,342.78
F-8.....		17,677.61		17,677.61
F-9.....			13,173.52	13,173.52
F-10.....			62,798.98	62,798.98
F-10-1.....			1,551.96	1,551.96
F-10-2.....			1,769.72	1,769.72
F-11.....			21,802.28	21,802.28
Totals.....		\$953,781.29	\$186,773.50	\$1,140,554.79

[fol. 8497]

G.....	839,493.40			839,493.40
G-1.....		4,689.65		4,689.65
G-2.....			\$40,879.31	40,879.31
G-3.....			73,031.38	73,031.38

## Defendant's Exhibit No. 28—Continued

Line	Year			Total
	First	Second	Third	
G-3-1.....			\$1,792.03	\$1,792.03
G-3-2.....			1,722.49	1,722.49
G-3-3.....			1,961.49	1,961.49
GA.....	\$70,590.19			70,590.19
GB.....	177,136.14			177,136.14
GB-1.....			7,544.28	7,544.28
GBA.....	52,782.17			52,782.17
GC.....	8,772.92			8,772.92
GD.....			472,949.20	472,949.20
GD-1.....			77,601.46	77,601.46
GD-1-1.....			2,810.05	2,810.05
GD-1-2.....			11,285.25	11,285.25
GD-2.....			5,615.78	5,615.78
Pecos Valley Mills.....			501.41	501.41
GD-3.....			2,893.53	2,893.53
GD-4.....			2,655.87	2,655.87
GD-5.....			9,094.26	9,094.26
GD-6.....			24,151.48	24,151.48
GDB.....			38,860.31	38,860.31
GDC.....			28,916.22	28,916.22
GDD.....			3,877.70	3,877.70
Totals.....	\$1,148,774.82	\$4,689.65	\$808,143.50	\$1,961,607.97
[fol. 8498]				
H.....	\$610,921.28			\$610,921.28
H-1.....			\$4,145.58	4,145.58
H-2.....			1,333.97	1,333.97
H-3.....			45,663.18	45,663.18
H-3-1.....			37,469.69	37,469.69
H-3-2.....			14,573.00	14,573.00
H-4.....			15,338.36	15,338.36
H-5.....			2,742.78	2,742.78
2nd H.....	344,857.72		523,801.52	868,659.24
2nd H Service.....			9,181.07	9,181.07
H-A.....	5,063.55			5,063.55
H-F.....	69,082.17			69,082.17
2nd H-F.....	9,646.12			9,646.12
H-G.....	11,650.84			11,650.84
H-M.....	16,305.66			16,305.66
H-N.....	32,680.31			32,680.31
Farwell Whse Line.....		\$132.24		132.24
H-O.....	11,560.62			11,560.62
H-R.....	8,046.04			8,046.04
H-S.....	14,056.14			14,056.14
H-T.....	19,944.90			19,944.90
H-U.....	13,455.88			13,455.88
Total.....	\$1,167,271.23	\$132.24	\$654,249.15	\$1,821,652.62
[fol. 8499]				
J.....	\$379,653.56			\$379,653.56
J-2.....		\$159,539.97		159,539.97
J-2-1.....		696.45		696.45
J-2-2.....		2,183.71		2,183.71

## Defendant's Exhibit No. 28—Continued

Line	Year			Total
	First	Second	Third	
J-2-3		\$3,388.04		\$3,388.04
J-2-4		2,393.42		2,393.42
J-2-5		598.39		598.39
J-2-6		1,159.94		1,159.94
J-2-7		988.86		988.86
J-2-8		3,872.88		3,872.88
J-3		2,227.69		2,227.69
J-4		1,778.28		1,778.28
J-6		6,666.94		6,666.94
J-7		3,064.84		3,064.84
J-8	19,412.63			19,412.63
Total	\$399,066.19	\$188,559.41		\$587,625.60
[fol. 8500]				
K	\$1,889,563.25			1,889,563.25
K-1		1,745.55		1,745.55
K-2		1,772.36		1,772.36
K-3		5,636.15		5,636.15
K-4		588.93		588.93
K-5			\$349,226.12	349,226.12
K-5-1			151,796.05	151,796.05
K-5-1-1			2,094.98	2,094.98
K-5-2			18,041.34	18,041.34
K-5-3			2,336.58	2,336.58
K-5-4			2,630.57	2,630.57
K-5-5			2,639.85	2,639.85
K-5-6			4,516.94	4,516.94
K-5-7			2,839.32	2,839.32
K-A	215,188.27			215,188.27
K-B	540,234.20			540,234.20
K-B-A	80,797.59			80,797.59
K-B-A-A	14,368.00			14,368.00
K-B-A-B	9,932.93			9,932.93
K-B-A-C	18,318.91			18,318.91
K-B-B	6,207.47			6,207.47
K-B-C	3,319.30			3,319.30
K-C	604,344.45	625,998.48		1,230,342.93
2nd K-C	183,948.05			183,948.05
K-C-1			2,020.98	2,020.98
K-C-2			1,359.07	1,359.07
K-C-3		3,989.71		3,989.71
K-C-4			2,102.58	2,102.58
K-C-5			1,502.36	1,502.36
K-C-6		2,799.99		2,799.99
K-C-7		115,121.80		115,121.80
K-C-8			75,280.57	75,280.57
K-C-8-1			1,551.12	1,551.12
K-C-8-2			1,763.28	1,763.28
K-C-8-3			1,734.27	1,734.27
Abilene Airport Tap			2,345.95	2,345.95
K-C-A	10,101.59			10,101.59
K-C-B	28,881.24			28,881.24
K-C-D	88,495.88			88,495.88
K-C-D-A	4,031.39			4,031.39
K-C-D-B	2,333.64			2,333.64
K-C-D-C	862.95			862.95

## Defendant's Exhibit No. 28—Continued

Line	Year			Total
	First	Second	Third	
K-C-E.....	\$50,624.17			\$50,624.17
K-C-E-A...	31,488.65			31,488.65
K-C-F.....	7,695.38			7,695.38
K-C-G.....	3,055.80			3,055.80
[fol. 8501]				
K-C-H.....	1,850.43			1,850.43
K-C-H-A..?	2,237.65			2,237.65
K-C-H-B...	3,414.55			3,414.55
K-C-J.....		\$4,420.21		4,420.21
K-C-J-A.....		2,445.73		2,445.73
K-C-K.....	22,318.70			22,318.70
K-C-K-A...	4,651.15			4,651.15
K-D.....	20,236.09			21,236.09
K-G.....	12,008.17			12,008.17
K-H.....	24,271.93			24,271.93
K-N.....	19,379.70			19,379.70
K-N-By-pass.....			\$16,638.95	16,638.95
K-P.....	88,158.81			88,158.81
K-P-A.....	5,906.85			5,906.85
Cheaney Suction Line.....			2.80	2.80
U. S. Gypsum Tap.....			71.96	71.96
Totals.....	\$3,999,227.14	\$764,518.91	\$642,495.64	\$5,406,241.69
[fol. 8502]				
L.....	701,902.34	989,836.24		1,691,738.58
L-1.....	19,845.65			19,845.65
L-2.....			3,375.57	3,375.57
L-3.....			11,089.68	11,089.68
L-4.....		7,234.57		7,234.57
L-5.....			5,623.09	5,623.09
L-6.....			2,074.28	2,074.28
L-7.....			6,242.43	6,242.43
L-8.....			492,016.21	492,016.21
L-8-1.....			30,365.48	30,365.48
L-8-1-1.....			1,844.44	1,844.44
L-8-2.....			3,270.12	3,270.12
L-8-3.....			1,841.26	1,841.26
L-8-4.....			4,864.54	4,864.54
L-8-5.....			2,416.41	2,416.41
L-8-6.....			3,006.97	3,006.97
L-8-7.....			2,508.96	2,508.96
Perry Gin.....			1,477.94	1,477.94
L-9.....	32,847.77			32,847.77
L-10.....			25,782.84	25,782.84
L-11.....		5,392.93		5,392.93
L-12.....			4,278.74	4,278.74
L-13.....			2,533.12	2,533.12
L-14.....			136,093.30	136,093.30
L-14-1.....			46,340.29	46,340.29
L-14-2.....			1,957.46	1,957.46
L-14-3.....			1,450.61	1,450.61
L-15.....			192,361.51	192,361.51
L-15-1.....			2,375.33	2,375.33

## Defendant's Exhibit No. 28—Continued

Line	Year			Total
	First	Second	Third	
L-15-2.....			\$1,970.66	\$1,970.66
L-15-3.....			19,270.96	19,270.96
L-15-4.....			14,177.44	14,177.44
L-16.....			2,053.21	2,053.21
L-17.....			3,197.04	3,197.04
L-18.....			3,239.65	3,239.65
L-19.....		\$33,360.91		33,360.91
L-20.....		23,557.25		23,557.25
L-21.....		15,182.04		15,182.04
L-22.....			2,204.42	2,204.42
L-23.....			2,500.84	2,500.84
L-24.....			46,510.58	46,510.58
L-24-1.....			506.94	506.94
L-25.....			33,820.56	33,820.56
L-26.....			109,462.00	109,462.00
L-26-1.....			1,945.03	1,945.03
L-26-2.....			15,663.85	15,663.85
L-26-A.....			17,528.31	17,528.31
[fol. 8503]				
L-27.....		7,374.46		7,374.46
L-28.....			9,029.90	9,029.90
2nd L.....		110,703.28		110,703.28
Totals.....	\$754,595.76	\$1,192,641.68	\$1,268,271.97	\$3,215,509.41
[fol. 8504]				
M.....		692,819.31		692,819.31
M-2.....		32,843.53		32,843.53
M-3.....		47,599.57		47,599.57
M-4.....			9,397.74	9,397.74
M-5.....			3,553.04	3,553.04
M-6.....			52,689.99	52,689.99
M-6-1.....			1,560.57	1,560.57
M-6-2.....			1,821.35	1,821.35
M-6-3.....			1,230.84	1,230.84
M-7.....			3,294.82	3,294.82
M-8.....			2,996.93	2,996.93
M-9.....			13,128.66	13,128.66
M-10.....			34.56	34.56
M-11.....			396,637.68	396,637.68
M-11-1.....			2,967.34	2,967.34
M-11-2.....			1,685.82	1,685.82
M-11-3.....			1,932.30	1,932.30
M-11-4.....			12,369.33	12,369.33
M-11-5.....			11,457.52	11,457.52
M-11-6.....			1,907.44	1,907.44
M-11-7.....			61,961.97	61,961.97
M-11-8.....			8,557.07	8,557.07
M-12.....			3,276.76	3,276.76
M-13.....		8,486.43		8,486.43
M-14.....			42,931.12	42,931.12
M-14-1.....			2,304.14	2,304.14
M-15.....			9,145.19	9,145.19
M-15-1.....			1,304.48	1,304.48
M-15-2.....			16,156.11	16,156.11
M-15-4.....			351.75	351.75
M-16.....			943.29	943.29
M-17.....			1,444.75	1,444.75

## Defendant's Exhibit No. 28—Continued

Line	Year			Total
	First	Second	Third	
M-18.....			\$75,417.84	\$75,417.84
M-19.....			54,088.42	54,088.42
M-19-1.....			1,801.59	1,801.59
M-20.....			19,220.60	19,220.60
M-21.....			5,252.13	5,252.13
M-21-4.....			334.09	334.09
M-22.....			4,429.67	4,429.67
Humble O & R Tap.....			78.66	78.66
Totals.....		\$781,748.84	\$827,665.56	\$1,609,414.40
[fol. 8505]				
O.....	\$1,252,909.05	\$1,624,077.31	582,177.23	3,459,163.59
O-1.....			118,748.79	118,748.79
O-1-1.....			7,868.38	7,868.38
O-1-2.....			7,403.84	7,403.84
O-1-3.....			3,852.19	3,852.19
O-1-4.....			2,242.94	2,242.94
O-1-5.....			2,014.29	2,014.29
Barren Brick Tap No. 1.....			384.02	384.02
Barren Brick Tap No. 2.....			841.86	841.86
Ferris Brick Tap No. 3.....			379.13	379.13
O-2.....			46,719.20	46,719.20
O-2-1.....			4,572.48	4,572.58
O-2-2.....			7,012.38	7,012.38
O-3.....		147,091.09		147,091.09
O-3-1.....			2,179.28	2,179.28
O-3-2.....			2,915.30	2,915.30
O-3-3.....		40,109.36		40,109.36
O-3-4.....			5.98	5.98
O-4.....	28,315.90			28,315.90
O-5.....			91.99	91.99
O-6.....		7,774.87		7,774.87
O-7.....			13,797.30	13,797.30
O-8.....			13,490.96	13,490.96
O-9.....			2,735.56	2,735.56
O-10.....			2,319.85	2,319.85
O-11.....			3,727.79	3,727.79
O-12.....			1,797.75	1,797.75
O-13.....			36,816.32	36,816.32
O-13-1.....			11,322.02	11,322.02
O-13-2.....			1,313.63	1,313.63
O-14.....			18.49	18.49
O-15.....			1,207.80	1,207.80
O-16.....			143,710.77	143,710.77
O-16-1.....			3,792.12	3,792.12
O-16-2.....			64,519.86	64,519.86
O-16-2-1.....			33,335.46	33,335.46
O-16-2-1-1.....			1,749.41	1,749.41
O-16-2-2.....			1,598.24	1,598.24
O-16-3.....			2,337.10	2,337.10
O-17.....			4,471.13	4,471.13
O-18.....			18,287.82	18,287.82
O-19.....			2,493.17	2,493.17
O-20.....			3,518.93	3,518.93



## Defendant's Exhibit No. 28—Continued

[fol. 8506]

## Year

Line	First	Second	Third	Total
O-21.....			\$81,432.45	\$81,432.45
O-21-1.....			1,993.49	1,993.49
O-21-2.....			1,414.99	1,414.99
O-22.....			5,225.89	5,225.89
O-23.....			11,611.18	11,611.18
O-24.....			1,505.81	1,505.81
O-25.....			6,166.09	6,166.09
O-26.....			5,282.10	5,282.10
O-27.....			1,183.18	1,183.18
O-28.....			22,886.27	22,886.27
O-29.....			382,588.39	382,588.39
O-29-1.....			29,363.46	29,363.46
O-29-3.....			608.21	608.21
O-29-4.....			1,703.15	1,703.15
O-29-5.....			1,810.34	1,810.34
O-29-6.....			2,414.80	2,414.80
O-29-7.....			125.00	125.00
O-29-8.....			1,673.38	1,673.38
O-29-9.....			1,640.29	1,640.29
O-29-10.....			5,538.53	5,538.53
O-29-10-1.....			1,346.02	1,346.02
O-29-10-2.....			568.61	568.61
O-29-11.....			1,598.19	1,598.19
O-30.....			3,173.08	3,173.08
O-31.....			1,993.05	1,993.05
O-A.....	\$28,766.68			28,766.68
2nd O-A.....	56,634.00			56,634.00
O-A-1.....		\$2,247.54		2,247.54
O-B.....	19,342.64			19,342.64
O-B-A.....	358.51			358.51
O-B-B.....	282.37			282.37
O-C.....	8,807.35			8,807.35
O-D.....	20,874.01			20,874.01
O-D-A.....	6,499.15			6,499.15
O-D A-A.....	166.40			166.40
O-D-B.....	203.46			203.46
O-D-C.....	2,805.62			2,805.62
O-E.....	43,831.62			43,831.62
O-E-A.....	46,446.85			46,446.85
O-E-A-A.....	19,421.77			19,421.77
O-E-B.....	56,064.00			56,064.00
O-E-B-A.....	6,354.39			6,354.39
O-E-C.....	6,233.37			6,233.37
O-G.....	25,349.44			25,349.44
O-H.....	65,513.17			65,513.17
[fol. 8507]				
O-K.....	16,034.81			16,034.81
O-L.....	84,184.98			84,184.98
O-L-A.....	6,064.32			6,064.32
O-L-A-A.....	9,296.28			9,296.28
O-L-B.....	14,894.26			14,894.26
O-M.....	1,380.96			1,380.96
O-N.....	7,913.74			7,913.74
O-O.....	5,777.57			5,777.57
T & P Coal & Oil Co.	1,011.33			1,011.33
O-O-1.....	4,595.70			4,595.70
Totals.....	\$1,846,333.70	\$1,821,300.17	\$1,732,616.81	\$5,400,250.68

## Defendant's Exhibit No. 28—Continued

[fol. 8508]

Line	Year			Total
	First	Second	Third	
R.		\$497,037.25		\$497,037.25
R-1.		45,448.34		45,448.34
R-2.		3,410.22		3,410.22
R-3.		4,195.67		4,195.67
R-4.		5,684.13		5,684.13
R-A.		28,081.05		28,081.05
R-B.		16,509.87		16,509.87
R-C.		28,185.86		28,185.86
R-D.		14,640.84		14,640.84
R-E.		35,939.20		35,939.20
Totals.		\$679,132.43		\$679,132.43

[fol. 8509]

16.	51,087.76		51,087.76
17.	55,524.12		55,524.12
17-1.	2,437.61		2,437.61
18.	284,555.84		284,555.84
18-1.	2,859.01		2,859.01
18-2.	2,860.72		2,860.72
18-3.	2,226.58		2,226.58
18-4.	3,100.66		3,100.66
18-A.	56,411.02		56,411.02
20.	116,613.25		116,613.25
21.	47,358.37		47,358.37
24.	1,615.36		1,615.36
25.	177,798.55		177,798.55
25-A.	7,926.23		7,926.23
25-B.	13,213.35		13,213.35
25-C.	1,443.86		1,443.86
25-D.	825.66		825.66
25-E.	502.82		502.82
26.	13,004.38		13,004.38
28.	43,407.75		43,407.75
28-A.	17,099.23		17,099.23
29.	27,409.62		27,409.62
30.	119,645.59		119,645.59
30-A.	14,605.86		14,605.86
33.	2,496.35		2,496.35
34.	5,681.70		5,681.70
39.	2,570.07		2,570.07
45.	72,407.76		72,407.76
51.	105,269.54		105,269.54
51-A.	172.15		172.15
51-B.	187.00		187.00
68.	2,998.66		2,998.66
86.	438.05		438.05
87.	2,954.06		2,954.06
110.	97,065.63		97,065.63
110-A.	14,200.79		14,200.79
133.	9,100.04		9,100.04
140.	27,087.26		27,087.26
153.	4,732.09		4,732.09
174.	10,615.16		10,615.16
174-A.	1,621.45		1,621.45
189.	6,899.02		6,899.02
213.	8,989.08		8,989.08

## Defendant's Exhibit No. 28—Continued

Line	Year			Total
	First	Second	Third	
224.....	\$6,752.81			\$6,752.81
232.....	2,121.63			2,121.63
234.....	3,654.20			3,654.20
237.....	1,126.89			1,126.89
241.....	1,947.73			1,947.73
Totals.....	<u>\$1,454,622.32</u>			<u>\$1,454,622.32</u>

[fol. 8510]

Line	Year			Total
	First	Second	Third	
T.P.U.				
Arkansas.....		\$29,157.64		\$29,157.64
Chesley				
6 in.....		6,983.49		6,983.49
8 in.....		125,967.53		125,967.53
C. & S. 107.....		61,961.16		61,961.16
C. & S. 108.....		22,582.39		22,582.39
C. & S. 109.....		79,303.86		79,303.86
Consolidated				
No. 1.....		22,749.53		22,749.53
No. 2.....		23,145.15		23,145.15
Oakland 6 in.....		17,976.85		17,976.85
Sibley.....		83,833.72		83,833.72
Strawn.....		182,643.40		182,643.40
Tiffin.....		60,329.38		60,329.38
Woodlawn 8 & 6 in.....		5,052.82		5,052.82
Total.....		<u>\$721,686.92</u>		<u>\$721,686.92</u>

[fol. 8511-8512]

Alvord.....		\$213.48		\$213.48
North Fort Worth.....		330.14		330.14
Petrolia.....		492.75		492.75
Totals.....		<u>\$1,036.37</u>		<u>\$1,036.37</u>

[fol. 8513] Taxes During Construction

## General Summary

Construction Period—First Year.....	\$80,042
Construction Period—Second Year.....	52,577
Construction Period—Third Year.....	27,466
Post Construction Period.....	13,733
Total.....	<u>\$173,818</u>

[fol. 8514] Definition:

As used in this estimate of the reproduction cost of the property and business of Lone Star Gas Company as of

January 1, 1933, Taxes During Construction is intended to include all State, County, Township, City, School, Road, Annual franchise, and all other taxes that would be levied and paid on the property of the company during construction and before the facilities would be used for operation, except special benefit assessments.

#### Taxes Paid:

For the year 1932, Lone Star Gas Company paid or accrued ad valorem taxes in the amount of \$299,676, corporation license fees of \$3,395 in the State of Oklahoma; and franchise taxes of \$17,784 in the State of Texas. These amounts include the ad valorem taxes, license fee and franchise taxes on the non-public service as well as the public service property of the company. Based upon an analysis made of the ratio of public service property of the company to its non-public service property, it has been determined that 96.4 per cent of taxes paid or accrued by Lone Star Gas Company in 1932 were attributable to its public service property. The total ad valorem taxes, license fees and franchise taxes paid or accrued by Lone Star Gas Company in 1932, and attributable to its public service property were as follows:

Ad valorem taxes .....	\$288,888
Franchise tax (Texas) .....	17,144
Corporation license fee (Oklahoma) .....	3,273
<b>Total .....</b>	<b>\$309,305</b>

[fol. 8515] Included in the estimate of Other General Costs were the following ad valorem taxes:

General Office and General Office Structure .....	\$6,851
Other General Land (Parking Lot) .....	288
Furniture and Fixtures .....	346
<b>Total .....</b>	<b>\$7,485</b>

Deducting this total from \$309,305 there remains \$301,820 as the annual tax factor to be used in the calculation of Taxes During Construction.

### Bases of the Estimate:

Any calculation of Taxes During Construction for a property in reproduction will be controlled by the following factors:

1. Total taxes attributable to a property in construction paid upon the completed plant at the date of inquiry.
2. The rate at which the property subject to taxation would be constructed.
3. The date at which construction is assumed to have been started.
4. The rate at which the property subject to taxation in construction passes into service during the construction period.

### Factor I:

The total taxes paid by Lone Star Gas Company and attributable to the property in construction have been previously fixed at \$301,820 per annum.

### Factor II:

In the analysis of total expenditures by periods, a complete break down has been made of the rate at which the various items of the property would normally be constructed in reproduction. Also a distribution has been made by construction periods of the incurrence of the undistributed general costs, with the exception of Taxes During Construction and Interest During Construction, which items are in a measure dependent upon the results of the primary analysis.

The major portion of the taxes attributable to construction and paid or accrued by the company in the sum of \$301,820, is based upon the value of the physical elements of the property as distinguished from elements of value represented by Undistributed General Costs. For this reason, the direct structural costs, together with the reproduction costs of the physical items subject to taxation found in each construction period have been used for the basis for the calculation of Taxes During Construction.

From the analysis of estimated expenditures by periods, the following data has been secured:



## Defendant's Exhibit No. 28—Continued

Physical Property—Pre-Construction Period . . .	\$3,049,057
Physical Property—Construction Period— First Year . . . . .	20,519,270
Physical Property—Construction Period— Second Year . . . . .	17,485,239
Physical Property—Construction Period— Third Year . . . . .	9,128,368
Total . . . . .	<u>\$50,181,934</u>

(NOTE.) From the physical property Pre-Construction Period, General Office Land, General Office Structure, Parking Lot, and Furniture and Fixtures have been deducted. The taxes on these items have been included in Other General Costs.

Per cent of Total—Pre-Construction Period . . . . .	6.08
Per cent of Total—Construction Period—First Year . . . . .	40.89
Per cent of Total—Construction Period—Second Year . . . . .	34.84
Per cent of Total—Construction Period—Third Year . . . . .	18.19

## Factor III:

It is evident that by a manipulation of the date at which it is assumed that construction would be started, it would be possible to materially affect the estimate of the costs of Taxes During Construction. The fairest and most logical method of approach to a solution of the problem is to assume that actual construction would begin July 1, and that the taxable property would be installed at a uniform rate thereafter.

## Factor IV:

In conformity with the classification of investment accounts prescribed by the Interstate Commerce Commission, this estimate of Taxes During Construction is based upon the assumption that Taxes During Construction would cease to be proper charges to investment whenever the property subject to taxation would in the normal progress of reproduction, pass from property in construction to property in operation. This has been done without consideration of the percentage of the plant designated as operative



that would be idle or inactive with reference to its capacity for service or its actual service performance at the date of inquiry.

This basic assumption necessitates the determination of the rate at which the property in construction would pass into partial operation. As will be more fully developed in the discussion of Going Value, or the Cost of Fixed Charges on Idle Plant, it has been assumed that the property constructed during the first construction year would become operative at the beginning of the Second Construction Year; that the property constructed during the Second Construction Year would become operative at the beginning of the Third Construction Year, and that at the end of the third Construction Year the property would be wholly operative. These assumptions have no reference to the percentage of such portions of the plant as are deemed to be operative that would in fact be idle, and therefore idle or non-operative from the standpoint of earning fixed charges.

From the previous determination of the percentage of [fol. 8518] taxable property completed in each period, and in conformity with the assumption that construction would begin July 1, and would be carried on uniformly thereafter, the following estimate has been made:

#### Pre-Construction Period:

Begun January 1.

Taxable Expenditures for the Period .....	\$3,580,178
---	-------------

Less:

General Office Structure .....	\$321,438	
General Office Land .....	44,545	
Parking Lot .....	18,052	
Furniture and Fixtures .....	147,086	531,121

Total Taxable Expenditures as of July 1 Beginning of First Construction Year .....	<u>\$3,049,057</u>
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#### Construction Period—First Year:

Begun July 1

Taxable Expenditures Pre-Construction Period	\$3,049,057
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Taxable Expenditure for the Period .....	20,519,270
--	------------

	<u>23,568,327</u>
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## Defendant's Exhibit No. 28—Continued

Less:

One half Expenditure for the Period .....	10,259,635
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Total Taxable Expenditures Applicable to Taxes

During Construction January 1, First Con-

struction Year .....	\$13,308,692
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Per cent of Total Taxable Property .....	26.52
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Construction Period—Second Year:

Begun July 1

Taxable Expenditures Pre-Construction Period .....	\$3,049,057
--	-------------

Taxable Expenditures First Construction Year .....	20,519,270
--	------------

Taxable Expenditures for the Period .....	17,485,239
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41,053,566

Less:

One half Expenditures for the

Period .....	\$8,742,620
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Taxable Expenditures Property

Operative .....	23,568,327	32,310,947
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Total Taxable Expenditures Applicable to Taxes

During Construction January 1, Second Con-

struction Year .....	\$8,742,619
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Per cent of Total Taxable Property .....	17.42
--	-------

[fol. 8519] Construction Period—Third Year:

Begun July 1.

Taxable Expenditures Pre-Construction Period .....	\$3,049,057
--	-------------

Taxable Expenditures First Construction Year .....	20,519,270
--	------------

Taxable Expenditures Second Construction Year .....	17,485,239
---	------------

Taxable Expenditures for the Period .....	9,128,368
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\$50,181,934

Less:

One half Expenditures for the

Period .....	\$4,564,184
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Taxable Expenditures Property

Operative .....	41,053,566	45,617,750
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## Defendant's Exhibit No. 28—Continued

Total Taxable Expenditures Applicable to Taxes During Construction January 1, Third Construction Year .....	\$4,564,184
Per cent of Total Taxable Property .....	9.10

## Post-Construction Period:

During the first year following the completion of construction which in this estimate is assumed to have taken place on July 1, taxes would be paid on the property of the company as of January 1, which in this case would be the total property found by the reproduction cost estimate. Of the taxes paid on the property as of January 1, following completion of construction, the taxes accrued during the last six months of construction would have accrued in part upon the average property in construction during the six months period. Expressed in terms of taxable property for one year, this would be one-fourth of the taxable property in the Third Construction year, or \$2,282,092, or 4.55 per cent of the total taxable property.

Upon figures from the foregoing calculation, it has been determined that an equivalent of 57.59 per cent of the total taxable property would have accrued taxes as property in [fol. 8520] construction. The application of this percentage to the sum \$301,820 results in a total cost of Taxes During Construction of \$173,818, distributed as follows:

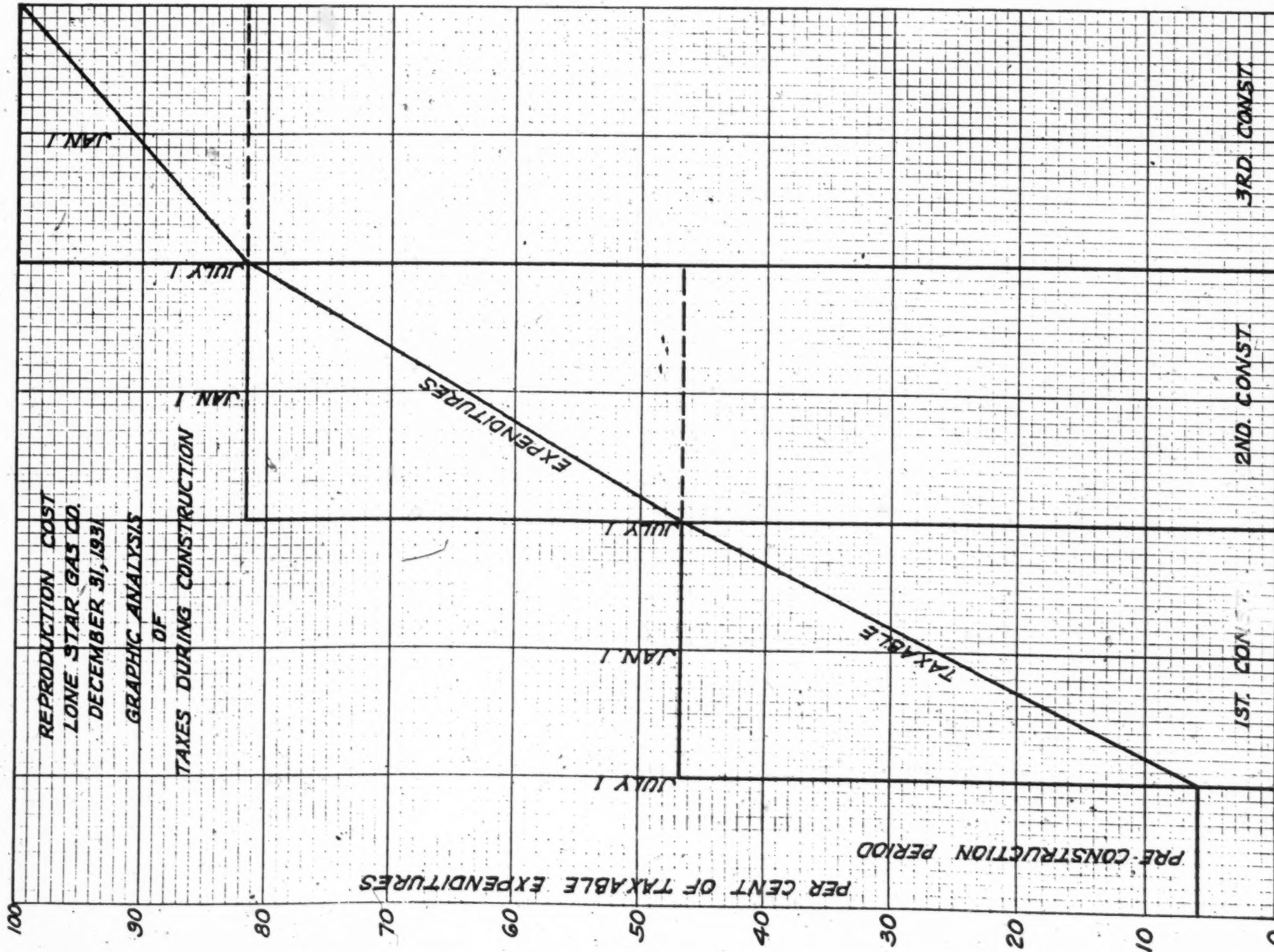
First Construction Year, 26.52% of \$301,820 .....	\$80,042
Second Construction Year, 17.42% of 301,820 .....	52,577
Third Construction Year, 9.10% of 301,820 .....	27,466
Post-Construction Period, 4.55% of 301,820 .....	13,733
Total .....	\$173,818

2948

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## Defendant's Exhibit No. 23—Continued

[fols. 8522-8523] Interest During Construction

## Summary

Pre-Construction Period .....	\$275,833
Construction Period—First Year .....	2,143,767
Construction Period—Second Year .....	1,685,707
Construction Period—Third Year .....	870,626
Total .....	<u>\$4,975,933</u>

[fol. 8524] Interest During Construction

## Definition:

As used in this estimate of the reproduction cost of the property and business of Lone Star Gas Company, Interest During Construction is intended to cover the cost of interest on all expenditure that would be made in connection with the reproduction of the corporate entity, and the physical property together with the expenditures for undistributed general costs, from the date of the incorporation of the company until such time as the property items representing these expenditures would pass from construction to operation.

In the classification of investment (fixed capital account) in road and equipment of steam roads prescribed by the Interstate Commerce Commission, Interest During Construction is defined as follows:

“When any bonds, notes, or other evidences of indebtedness are sold, or any interest-bearing debt is incurred for acquisition and construction of original road and equipment, extensions, additions, and betterments, the interest accruing on the part of the debt representing the cost of property chargeable to road and equipment accounts (less interest, if any, allowed by depositaries on unexpended balances) after such funds become available for use and before the receipt or the completion or coming into service of the property so acquired shall be charged to this account.

When such securities are sold at a premium, the proportion of such premium assignable to the time between the date of the actual issuance of the securities and the time when the property acquired or the improvement made be-

comes available for service shall be credited to this account.

This account shall also include such proportion of the [fol. 8525] discount and expense on funded debt issued for the acquisition of original road, original equipment, road extensions, additions, and betterments, as is equitable assignable to the period between the date of the actual issuance of securities and the time when the property acquired or the improvement made becomes available for the service for which it is intended. The proportion of discount and expenses thus chargeable shall be determined by the ratio between the period prior to the completion or coming into service of the facilities or improvements acquired and the period of the entire life of the securities issued.

This account shall also include reasonable charges for interest, during the construction period before the property becomes available for service, on the carrier's own funds expended for construction purposes."

#### Basic Factors of the Estimate:

In the calculation of Interest During Construction, insofar as this element of expense would be incurred in the reproduction of the Property of Lone Star Gas Company as of January 1, 1933, the following basic factors would be involved:

1. The time assigned to the pre-construction, construction, and post-construction periods.
2. The rate of interest charged for funds advanced for construction and other expenditures.
3. The requirements of the fiscal agents with reference to the sums advanced at stated intervals.
4. The amount of interest earned on unexpended balances.
5. The time at which expenditures would be made from the date of incorporation until such time as expenditures would not be attributable to construction.
- [fol. 8526] 6. The rate during the period of construction at which the various elements of property would become operative.

(1.) Time assigned to the pre-construction, construction and post-construction periods.

The pre-construction period has been fixed at six months and includes the time from date of incorporation to the time at which actual construction would begin.

The construction period has been fixed at three years and includes the time from the beginning of actual construction to the time at which the physical elements of the property would be complete.

The post-construction period has been fixed at six months and includes the time from the end of construction to the time when engineering, accounting and other records attributable to construction would be complete.

The duration of each of the foregoing periods has been determined as the minimum time that would be required in which to economically do the work that would necessarily be done in connection with the reproduction of the property of Lone Star Gas Company as of January 1, 1933.

(2.) The rate of interest charged for funds advanced for construction and other expenditures.

In fixing the rate of interest that would be paid for funds advanced for construction and other expenditures in the reproduction of Lone Star Gas Company, consideration must be given to several factors that would have a direct bearing upon the rate paid.

(a) In a reproduction cost estimate the rate should be based not on the financial credit of the property at the time of the appraisal but on the assumption that the property is a new property and without operating history.

[fol. 8527] (b) Consideration must be given to financial conditions existing at the date of the appraisal. In fixing the unit costs of the various elements of the physical property, consideration has been given to the current market prices for both labor and materials. There is a close relation between the downward trend of commodity prices and the upward trend of the cost of money. It would be irrational in an estimate of this character to give effect to spot prices for the materials of construction without giving some weight to the current cost of money. In this estimate no attempt has been made to give full effect to the unusual financial conditions existing as of January 1, 1933. Nevertheless, interest rates that might have been applicable during the years preceding 1929 could not be used as the basis for an estimate at the date of this appraisal.

2951

(c) Consideration must be given to the financial structure adopted provided this financial structure conforms to that, which in practice, would result in the minimum cost of money to the company.

In the analysis of Preliminary Development and Organization Costs, it was assumed that 50% of the total money required by the company would be secured from sale of mortgage bonds, 25% from the sale of preferred stock, and 25% from the sale of equity stock. This structure or financial plan is one that would be favorable to the company, particularly in view of the fact that it has been assumed that the equity money would be provided by the originating group.

The following tabulation sets out the estimated cost of [fol. 8528] money to the company (interest basis) using the financial structure above outlined.

Type of Security	Rate	Net to Company	Rate	Weighted Rate
50% bonds	6.5%	90	7.22%	3.61%
25% preferred	8.0%	90	8.89%	2.22%
25% common	10.0%	Par	10.00%	2.50%
Weighted Average Annual Rate .....				8.33%
Annual Rate Adopted .....				8.00%

The rate adopted for the purpose of calculating Interest During Construction does not give full effect to financial conditions existing at the date of the appraisal. It would have been impossible at that time, and it would be impossible now to secure funds for any new natural gas enterprise upon terms as favorable as those used in the calculation of the interest rate adopted.

(3.) The requirements of the fiscal agents with reference to the sums advanced at stated periods.

In the construction of large projects such as Lone Star Gas Company, funds must be provided well in advance of immediate requirements. In many cases the fiscal agents require of the Company the assumption of the entire issue before any advances will be made. In this estimate an extremely favorable condition, from the standpoint of cost to the company, has been assumed. As one of the bases for the calculation of Interest During Construction, it has been assumed that an amount representing the estimated ex-

penditures for each successive period of construction would be advanced by the fiscal agents. Under present financial conditions this is the most favorable arrangement that could be made.

(4.) Amount of interest earned on unexpended balances.

It is evident that a certain proportion of advances cover- [fol. 8529] ing the estimated expenditures for the Pre-Construction Period, the three construction years, and the Post-Construction Period would remain unexpended during a portion of the time. In order to provide for this fact, it has been assumed that for each advance, except that provided for the Pre-Construction Period, 75 per cent of the total sum would remain as an unexpended balance for three months; that 50 per cent would remain as an unexpended balance for three months, and that 25 per cent of the total sum advanced would remain as an expended balance for three months. It is further assumed that interest would be allowed at the rate of two per cent per annum on the amounts represented by unexpended balances, and that such interest as would accrue from this source would be credited to the cost of Interest During Construction. This allowance of two per cent per annum on unexpended cash balances has not been borne out by recent experience of Lone Star Gas Corporation in its fiscal arrangements.

Exception to the above method has been made in the case of the advances for the Pre-Construction Period for the reason that a very large proportion of the expenditure attributable to this period would be made immediately upon the perfection of corporate organization. All of the preliminary and organization costs, including the remuneration of the services of the originating group, would be liquidated immediately upon incorporation, and the general office building and general office land would be acquired immediately thereafter.

In the subsequent construction years, the rate of expenditure would be fairly uniform during each year, and no material error will grow out of the assumption that such would be the case.

[fol. 8530] The money required for Post-Construction expenses has been included in the expenditures of the last construction year.



(5) The time at which expenditures would be made from the date of incorporation until such time as expenditures would not be attributable to construction.

As previously developed under Expenditures by Period, the total expenditures, \$59,512,984, would be divided by periods as follows:

Pre-Construction Period.....	\$6,895,832
Construction Period—First Year.....	22,673,380
Construction Period—Second Year.....	19,326,719
Construction Period—Third Year.....	10,617,053

The expenditures during the Pre-Construction Period were allocated to the construction period as follows:

Construction Period—First Year.....	\$2,971,414
Construction Period—Second Year.....	2,532,839
Construction Period—Third Year.....	1,391,579

#### Calculation

Pre-Construction Period	
\$6,895,832 at 8% for six months.....	<u>\$275,833</u>

#### Construction Period—First Year

##### Expenditures

Pre-Construction.....	\$6,895,832
This Period.....	<u>22,673,380</u>

Total..... \$29,569,212

\$29,569,212 at 8% for one year..... \$2,365,537

##### Less:

75% of \$29,569,212 at 2% for three months..... \$110,885

50% of 29,569,212 at 2% for three months..... 73,923

25% of 29,569,212 at 2% for three months..... 36,962

221,770

Total..... \$2,143,767

• Defendant's Exhibit No. 28—Continued

[fol. 8531]

Construction Period—Second Year

Expenditures

Previous Expenditures..... \$29,569,212

This Period..... 19,326,719

48,895,931

Less: \$22,673,380

2,971,414

\$25,644,794\*

Net for Period..... \$23,251,137

\* Plant in Service Second Year

\$23,251,137 at 8% for one year..... \$1,860,091

Less:

75% of \$23,251,137 at 2% for  
three months..... \$87,192

50% of 23,251,137 at 2% for  
three months..... 58,128

25% of 23,251,137 at 2% for  
three months..... 29,064      174,384

Total..... \$1,685,707

Construction Period—Third Year

Expenditures

Previous Expenditures..... \$48,895,931

This Period..... 10,617,053

\$59,512,984

Less: \$22,673,380

2,971,414

19,326,719

2,532,839

47,504,352\*

Net for Period..... \$12,008,632

\* Plant in Service third year

\$12,008,632 at 8% for one year..... \$960,691

Less:

75% of \$12,008,632 at 2% for  
three months..... \$45,032

50% of 12,008,632 at 2% for  
three months..... 30,022

25% of 12,008,632 at 2% for  
three months..... 15,011      90,065

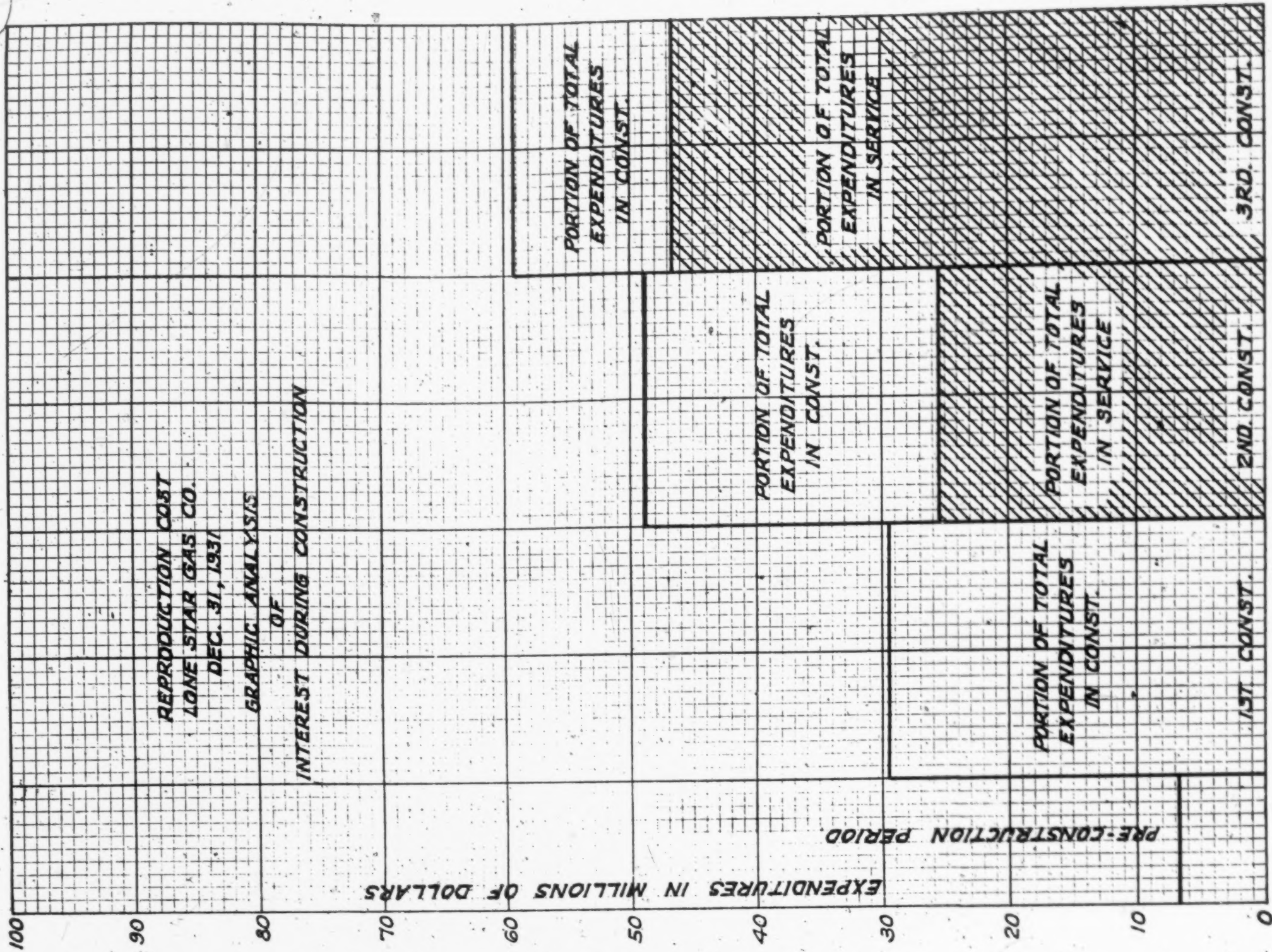
Total..... \$870,626

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## Defendant's Exhibit No. 28—Continued

## [fols. 8533-8534] Going Value or Cost of Business Development

## Fixed Charges on Idle Plant—Development Periods

Interest and Return .....	\$8,042,414
Depreciation .....	3,111,610
Taxes .....	435,044
Personnel Costs .....	200,000
	<hr/>
	\$11,789,068
Less:	
Credits for Net Industrial Revenue .....	3,996,180
	<hr/>
Total .....	\$7,792,888

## [fol. 8535] Going Value Based on Reproduction Cost of Business Development

## Definitions:

As used in this estimate of the reproduction cost of the property and business of Lone Star Gas Company as of January 1, 1933, Going Value is intended to cover the reproduction cost of those elements of worth or value not developed by an appraisal of the physical property, but inherent in the property and business of the company as of that date by reason of the following facts:

1. That approximately 230,000 domestic consumers received their supply of natural gas from the facilities afforded by the property of Lone Star Gas Company.

2. That these domestic consumers by the purchase of equipment and appliances representing an investment of more than \$40,000,000 and by a knowledge of the value of natural gas service, acquired over a period of years, had developed an average annual consumption of approximately 80 M cubic feet per domestic meter installed.

3. That approximately 1,400 industrial consumers with diversified requirements received their fuel supply from the facilities afforded by the property of Lone Star Gas Company, and that the annual sales resulting from this use was approximately 15,000,000 M cubic feet.

4. That in addition to the active industrial accounts, other large industrial consumers were attached to the company's system. That those consumers had the equipment required for the use of natural gas installed at their plants, were familiar with the use and advantages of natural gas, and had temporarily discontinued the use of natural gas solely on account of unusual conditions in the fuel market.

5. That the company by the purchase and development of leases and by the consummation of advantageous gas purchase contracts, had available to its transportation system a supply of gas substantially in excess of the present maximum requirements of its markets. That this supply of gas was highly diversified with reference to the ~~lead~~ center of the market as to assure economical transportation to the market.

[fol. 8536] 6. That the company over a period of more than twenty years had developed a highly trained and efficient operating personnel consisting of executives, counsel, technicians, departmental heads, and other employees familiar with all phases of the natural gas business. That such a trained organization had peculiar value by reason of the fact that the natural gas business is not a universal utility service such as water, light and power, transportation, or telephone service, but is confined to specific geographic areas and the supply of experienced gas executives and technicians is therefore limited and correspondingly difficult to secure.

7. That the company over a period of more than twenty years operating experience had developed and had in use efficient operating routines. That valuable operating records and statistical and technical data has been accumulated and that such routines, records and data were specifically applicable to the property and business of Lone Star Gas Company.

8. That by the application of rate schedules for the sale of domestic gas that would have been less than the value of the services and would not have encountered the application of the law of diminishing returns, the company could have earned in addition to operating charges a reasonable return on the value of its property determined by this appraisal including the estimate for Going Value and a proper

annual allowance to cover depreciation, amortization, dry hole expense, and cancelled and surrendered leases.

Of the foregoing, items 1 to 7, inclusive, may be defined as the specific elements that contributed to and in the aggregate made up the Going Value of Lone Star Gas Company as of January 1, 1933.

From the standpoint of a reproduction cost estimate of the property and business of the company, these items can be evaluated upon the basis of what it would have cost a new company identical with Lone Star Gas Company insofar as all of its physical elements were concerned to have secured the trained operating personnel, established the efficient operating routines, and acquired the volume of sales of Lone Star Gas Company as of January 1, 1933.

Item 8 may be defined as the factor that establishes the propriety of attributing value to these costs as well as to the cost of reproducing the physical property. This is true [fol. 8537] for the reason that the value of a utility property, no matter what the cost of reproduction may be, can never be greater than that sum, expressed in dollars, upon which the utility can earn its return and depreciation through the application of rates for its service that do not exceed the value of that service.

In this connection the converse is also true, and the existence of Going Value cannot be denied by reason of the fact that earnings are inadequate under rate schedules that are substantially below the value of the service and are substantially less than those that might bring into operation the law of diminishing returns.

#### Basic Assumptions:

In the estimate, the costs that would be incurred in reproduction in connection with items 5, 6 and 7 have been included in Preliminary Development and Organization and Undistributed General Costs.

The inclusion in the appraisal of the physical property of gas leases and rights at their fair market value, and the inclusion in the preliminary and undistributed costs of the cost of a geological and a land and lease personnel that would be able within the comparatively short time ascribed to the preliminary development construction periods, to reproduce the geological records and data, and secure the land

and leases of Lone Star Gas Company as of January 1, 1933, provides in a general way for the cost of consolidating the gas supply.

The estimated cost of securing a trained personnel for the construction period will be developed in a subsequent section of the report. All construction costs used in the [fol. 8538] development of the unit costs of the physical property have been based upon the supervision of the work by the trained executive and supervisory organization of Lone Star Gas Company. The organization was secured and trained over a twenty three year operating and construction experience. That it would cost a substantial sum of money to assemble and organize this type of executive and supervisory personnel is obvious.

It seems reasonable to assume in this connection that this personnel would gradually change in its functions as the property passed from construction to operation, and that during the three and one half years ascribed to construction and preliminary work that such an organization would develop efficient operating routines.

The cost of reproducing the final engineering records of Lone Star Gas Company as of January 1, 1933 has been specifically appraised and included as a part of Direct Structural Costs and the estimated cost of the collection of geological records, has been included under Administration and Legal Costs.

It is certain that the adoption of the methods above outlined, and which seemed the most practical in this case, has resulted in use of a figure that fails to represent the full value of the elements under consideration. The value to a going concern of a group of highly trained men, most of whom have had the advantage of having been associated with the property over a long period of time, and who have by this association acquired an intimate knowledge of every phase of its affairs, cannot be adequately appraised by the estimated cost of securing the services of hypothetical substitutes.

[fol. 8539] With these elements of cost and value elsewhere provided for in the estimate, there remains the problem of fixing the value as of January 1, 1933 of the factors included in items 1, 2, 3 and 4 as set out under Definitions. These four items, as factors contributing to the value of Lone Star Gas Company have to do with the value of a busi-

ness of the company as distinguished from the value of its physical property. In conformity with the plan of fixing the present value of the physical property by means of the estimated cost of its reproduction, the present value of the business has been determined by the estimated cost of reproducing it.

A basic assumption of all reproduction cost estimates of physical property is that the property is non-existent at the date of the appraisal. A direct corollary of this basic proposition is the assumption that the business that has been created as the direct result of the historical operations of the company is non-existent at the date of the appraisal.

In the subsequent calculations, it has been assumed that the business of Lone Star Gas Company that has been the result of the operations of Lone Star Gas Company as a marketing agency for the sale of natural gas was non-existent at the initiation of the project in reproduction.

Any utility property in operation must meet three so-called fixed charges. They are so designated in order to distinguish them from the more or less fluctuating costs of operation and for the further reason that the amount of the accruals to meet these charges has little or no relation to the volume of business done by the company. These so-called fixed charges are:

- [fol. 8540] 1. Return on over-all cost of the property.
2. Depreciation on the depreciable property.
3. Ad Valorem taxes.

(1) Return:

The instant that a property item passes from construction into operation, Interest During Construction as applied to the over-all cost of this item ceases to be a proper charge to capital account. The changed status of this property item from an item in construction to an item in operation in no way affects the continuity of the interest charge if mere interest alone is to be considered. In the case of a going concern, this interest charge becomes a reasonable return for the use of the property and is therefore greater than mere interest inasmuch as it must also cover the reward for operation and management. It is also true that the volume



of business handled by this item of property affects neither the continuity nor the amount of this charge.

## (2) Depreciation:

The instant that a property item passes from construction to operation, depreciation accruals must be set up if the lessening worth of the item is to be offset and the liability for its ultimate replacement met. Unlike properties in which depreciation is, in a measure, a function of amount of use to which the equipment is put (street railways and the like) the depreciable property of a natural gas pipe line company suffers physical depreciation without regard to the amount [fol. 8541] of business done. This statement does not apply to the depletion of gas reserves and the charges for amortization and abandonment that must be accrued on account of the depletion of reserves.

## (3) Taxes:

The instant that a property item passes from construction into operation, Taxes During Construction as represented by the taxes attributable to this item ceases to be a proper charge to capital account. As in the case of return, the liability of the owner for the payment of taxes and the necessity for an accrual to meet this payment is in no way affected by the changed status of the property item. It is also true that the amount of the tax attributable to this property item would be fixed on taxable value, and not upon the volume of business handled.

It is evident from the foregoing analysis that in connection with the reproduction of Lone Star Gas Company within the three year period ascribed to construction, certain elements of the physical property would pass from construction into limited operation during the construction period, and at the end of the construction period the entire plant would become operative. It is also evident that the sum of the three fixed charges would begin to accrue upon the cost of the proportionate part of the plant passing into operation during the construction period, and upon the cost of the entire plant at the end of the construction period.

If the business of Lone Star Gas Company was non-existent at the date of the initiation of the project, it would [fol. 8542] have been impossible for the property in reproduction to have developed and acquired the business of



Lone Star Gas Company as of January 1, 1933, except through a period of intensive business development that would necessarily have extended several years beyond the date of completion. During this period of business development the fixed charges, return, depreciation, and taxes would have accrued upon the total cost of the completed plant irrespective of the volume of business done. It is also true that during this time a substantial proportion of the completed plant would have been idle compared to the amount of business done by the identical plant, the property of Lone Star Gas Company as of January 1, 1933. This percentage of the plant idle would have been at its maximum at the time the completed plant passed from construction to operation, and would have diminished to zero at the end of the development period. The aggregate cost developed by the application of the fixed charges to the percentage of the completed plant idle, from the time that its constituent elements passed from construction to operation to the date at which the business of the plant in reproduction would have equalled the business of Lone Star Gas Company as of January 1, 1933, is a fair measure of the cost of reproducing the business of Lone Star Gas Company at the date of this appraisal. This method has been applied in the subsequent calculation.

In fixing the ratio of idle plant during the development period to the plant in use as of January 1, 1933, the rate of acquisition of the existing domestic sales only has been used in the subsequent calculations. The estimated net revenue that would be derived from the concurrent sales of industrial gas has been used in the subsequent calculations. [fol. 8543] The estimated net revenues that would be derived from the concurrent sales of industrial gas has been applied as a credit to the cost thus developed.

#### Method of Calculation:

The following estimate of the cost of reproducing the business of Lone Star Gas Company as of January 1, 1933, has been based upon the application of the fixed charges previously defined, to the sum of money represented by the cumulative percentage of the total cost of the property that would be idle in comparison with the domestic meter saturation and per meter domestic sales of the company as of

January 1, 1932\*, during the period of time in which it would be necessary to secure this domestic business. From the total thus obtained there has been deducted the estimated net revenues from the sale of industrial gas that would have accrued during this development period.

Certain assumptions have been made that serve as the basis for the subsequent calculations. These assumptions conform to conditions that would normally be met in reproducing the business of Lone Star Gas Company and have been based upon a careful analysis of historic data.

A detailed study has been made of the existing system and of the component parts of the system that would be constructed in each of the three years of the construction period. The hypothetical construction program that resulted from [fol. 8544] this detailed study, and which has been used as the basis for the calculation of Interest During Construction and other general costs that would be affected by the character and quantity of expenditures in each construction year was developed primarily upon the assumption that the larger and more important markets of the company would be attached at the end of the first construction year and that the smaller outlying markets would be reached at the end of the last construction year.

This assumption conforms to the historical development of the property and results in minimum charges for the cost of business development.

For practicability of calculation, it has been estimated that at the end of the first construction year a certain percentage of the completed plant would pass from construction to operation. The proportionate part of the completed plant affected by this transition has been fixed by the ratio of the cost of the physical property installed during the first construction year to the total cost of the physical property. The same method has been applied to the plant completed in each of the two succeeding construction years.

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\*NOTE.—All calculations of the rate of domestic business saturation are based upon the domestic meter and use saturation of Lone Star Gas Company as of January 1, 1932. The meter and use saturation as of that date were practically unchanged as of January 1, 1933. The same period was also used for the determination of the credit to be applied for net revenue from industrial sales.

A determination has been made of the cities and towns now served by Lone Star Gas Company that would be attached to the system by reason of each successive year's construction.

It has been assumed that the group of cities and towns served by the section of the system completed during the first construction year would begin domestic service at the beginning of the second construction year, that the cities and towns served by the section of the system completed [fol. 8545] during the second construction year would begin domestic service at the beginning of the third construction year, and that the cities and towns served by the section of the system completed during the third construction year would begin domestic service at the beginning of the first year following the completion of construction.

The result of the application of this method is shown as follows:

**First Construction Year:**

No domestic business development.

**Second Construction Year:**

First domestic development year for first group of cities and towns attached.

**Third Construction Year:**

Second domestic development year for first group of cities and towns attached.

First domestic development year for second group of cities and towns attached.

**First Year Following Completion:**

Third domestic development year for first group of cities and towns attached.

Second domestic development year for second group of cities and towns attached.

First domestic development year for third group of cities and towns attached.

This method has been applied to each succeeding year until the development of the domestic business of Lone Star Gas Company as of January 1, 1932 would be complete.

In order that the calculations might be made, it was necessary to make the following determinations:

1. The rate at which the individual cities and towns served by Lone Star Gas Company would acquire the domestic

meter saturation and domestic customer use as of January 1, 1932.

[fol. 8546] 2. The percentage of the total domestic business of Lone Star Gas Company represented by the domestic business of each group of cities and towns initiating domestic sales at the beginning of the second construction year, the third construction year, and the first year following completion.

3. The proper annual rates to be applied for interest, depreciation and taxes upon the cumulative percentage of the reproduction cost of the property of Lone Star Gas Company as of January 1, 1932, found to be idle during the period of business development.

4. The percentage of the total reproduction cost of Lone Star Gas Company completed during each of the construction years.

5. The rate at which the net revenue from the sale of industrial gas, earned by Lone Star Gas Company, year ended January 1, 1932, would be acquired during the development period.

Analysis of the Rate at Which the Individual Cities and Towns Would Acquire the Domestic Meter Saturation and Domestic Customer Use as of January 1, 1932:

(EXPLANATORY NOTE.) Lone Star Gas Company sells no gas direct to domestic consumers except in the case of the domestic sales of the Fort Worth Division. If the Fort Worth Division is grouped with the other cities and towns served, the rate at which Lone Star Gas Company would acquire its saturation of domestic business would be directly proportional to the rate at which saturation of domestic business would be acquired by the cities and towns receiving their supply of domestic gas from its system.

The cities and towns served by the pipe line system of Lone Star Gas Company logically fall into three groups when classified with reference to domestic natural gas service. Each of these groups have distinct characteristics and would acquire domestic meter and customer use satura-

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Per Cent of Consumers and Consumption

CURVES  
SHOWING HISTORIC DEVELOPMENT  
DOMESTIC BUSINESS  
DALLAS GAS COMPANY  
1908 - 1930

- Per Cent of Domestic Meters
- Per Cent of Domestic Meter Consumption  
(1000 B.T.U. Basis)
- Normal Projected Development Per Cent  
of Domestic Meters
- Normal Projected Development Per Cent  
of Domestic Consumption

Per Cent of Domestic Meters. Based on  
one meter per 4.5 inhabitants = 100%

Per Cent of Domestic Meter Consumption.  
Based on 17500 cubic feet per annum  
(1000 B.T.U. basis) per inhabitant = 100%



*Per Cent of Domestic Meter Consumption  
Based on 12,500 cubic feet per annum  
(1000 B.T.U. basis) per inhabitant = 100%*

1908

1910

1912

1914

1916

1918

1920

1922

1924

1926

1928

1930

*YEARS*

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tion over different intervals of time. These groups are as follows:

**Group A—Metropolitan Districts:**

The Dallas and County Gas Companies that serve the Dallas Metropolitan area and the Fort Worth Division of Lone Star Gas Company are the only distribution agencies served [fol. 8548] by the system that fall into this classification. These metropolitan districts would be served by artificial gas prior to the introduction of natural gas. Despite this fact, however, domestic saturation would require a longer development period than would be required in the case of the second and third groups.

**Group B—Intermediate cities** that would be served by artificial gas prior to the introduction of natural gas.

Waco, Wichita Falls and Abilene are cities served by Lone Star Gas Company that are typical of the cities that have been classified in this group. These cities would acquire their domestic saturation at a more rapid rate than the Metropolitan Districts, but at a slower rate than the towns classified under Group C.

**Group C—Small cities and towns** that would not be served by artificial gas prior to the introduction of natural gas.

The majority of the towns served by the distribution plants of the Community National Gas Company are typical of this group. Despite the fact that no artificial gas service would exist prior to the introduction of natural gas, domestic saturation would be acquired more rapidly than in the case of Group A and B.

**Analysis—Group A:**

The historical development of domestic meter saturation and domestic customer use of the combined business of the Dallas Gas Company and County Gas Company from the date of the introduction of natural gas to the date of meter and use saturation has been used as the basis for the calculation for Group A.

## Defendant's Exhibit No. 28—Continued

## Dallas Gas Company and County Gas Company

## History of Meter Saturation

Year	Population Served	Meters in Place	Ratio of Meters to Population	Percent Saturation
1908.....	85,000	5,663	15.0	30.0
1909.....				
1910.....	92,100	8,743	10.5	42.9
1911.....	107,000	10,902	9.8	45.9
1912.....		14,039		
1913.....		17,093		
1914.....		20,938		
1915.....	134,000	21,069	6.4	70.3
1916.....		20,398		
[fol. 8549] 1917.....		22,069		
1918.....		23,716		
1919.....		25,745		
1920.....	204,000	31,341	6.5	69.2
1921.....	206,000	36,142	5.7	79.0
1922.....	222,000	39,826	5.6	80.4
1923.....	239,000	44,992	5.3	83.4
1924.....	256,000	51,166	5.0	90.0
1925.....	272,000	57,107	4.8	93.7
1926.....	288,000	62,328	4.6	98.0
1927.....	299,000	64,664	4.6	98.0
1928.....	310,000	66,859	4.6	98.0
1929.....	315,000	69,546	4.5	100.0
1930.....			4.5	100.0

Natural gas introduced in 1910.

Population figures Worley's Directory and Federal Census.

## History of Use Saturation

Year	Annual Dom. Sales M. Cu. Ft.	Equivalent Vol. 1000 B.t.u.	Sales Per Capita Cubic Feet	Percent Saturation
1910.....	234,715	178,536		
1911*.....	831,110	623,332	5,770	33.0
1912.....				
1913.....				
1914.....				
1915.....	2,213,415	1,660,061	12,400	70.9
1916.....				
1917.....				
1918.....				
1919.....				
1920.....	2,576,280	2,576,280	12,600	72.0
1921.....				
1922.....	3,102,733	3,102,733	13,900	79.4
1923.....				
1924.....	3,736,633	3,736,633	14,600	83.4
1925.....				
1926.....	4,441,353	4,441,353	15,300	87.4
1927.....				
1928.....				
1929.....				
1930.....	5,534,290	5,534,290	17,500	100.0

\* First full year natural gas service

Natural gas on April 29, 1910..... 750 B.t.u.

December 1918 to January 1920..... 950 B.t.u.

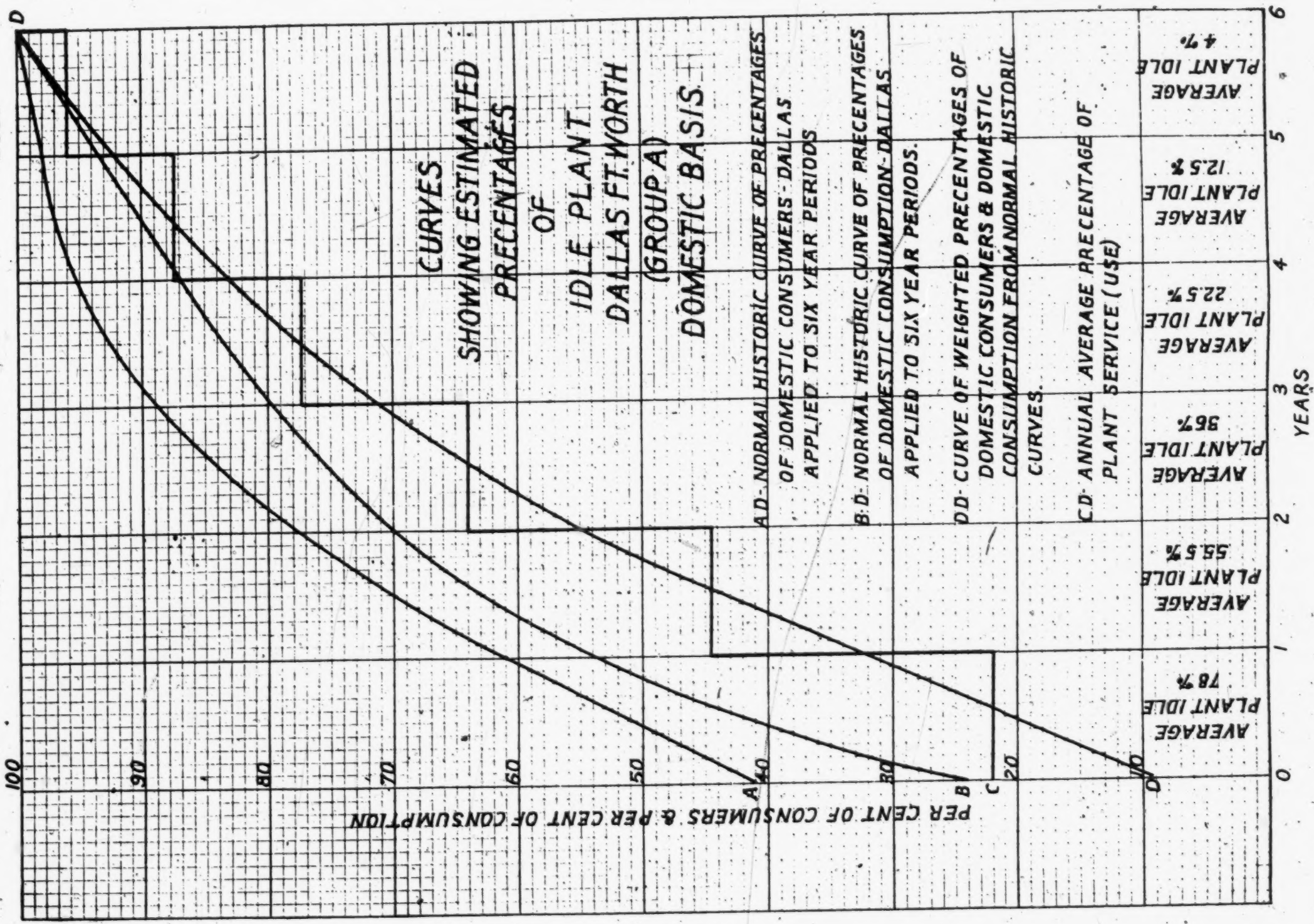
January 1, 1920..... 1000 B.t.u.

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[fol. 8551] This statistical data is shown in graphic form in Curves Showing Historic Development Domestic Business—Dallas Gas Company 1908-1930.

An inspection of this graph discloses the fact that the development of domestic meter and use saturation was rapid and uniform from 1910 to 1915, and that saturation was static from 1915 to 1920, and that from 1920 to the date of 100% saturation there was a resumption of the rate of increase of meter and use saturation. The static condition following 1915 was due to several abnormal circumstances. In the case of domestic meters, there was a rapid increase in population and a restriction in utility extensions and home construction due to war time restrictions. This combination of circumstances resulted in an actual decline in the percentage of meter saturation. In the case of domestic use the similarity in the behavior of the curves was due to acute gas shortage during the period culminating in 1919 and 1920.

For these reasons the curves for meter and use saturation have been projected, as shown, for the purpose of eliminating the effect of the abnormalities noted.

With these normal curves of historical development as a basis, a graph was prepared translating these normal historic developments that had extended over a period of twenty years into a hypothetical development period of six years. This graph is shown as Curves Showing Estimated Percentage of Idle Plant—Dallas and Fort Worth (Group A) Domestic Basis.

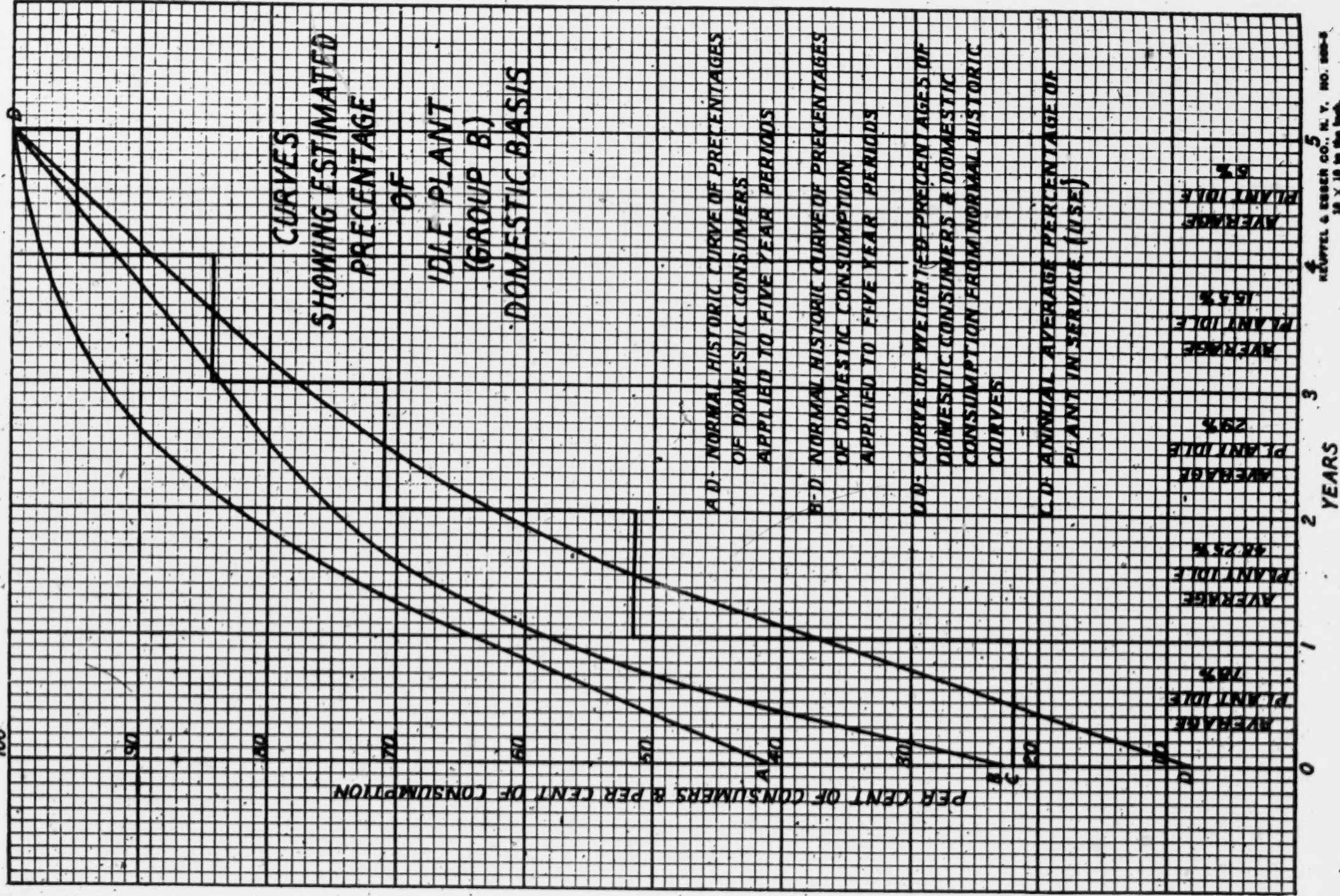
From this graph there has been developed the estimated percentages of idle plant, domestic basis, by development years for Group A.

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## Defendant's Exhibit No. 28—Continued

[fol. 8553]

Development Year	Average Percent of Plant Idle	Average Percent of Plant Active
1 .....	78.0	22.0
2 .....	55.5	44.5
3 .....	36.0	64.0
4 .....	22.5	77.5
1 .....	12.5	87.5
6 .....	4.0	96.0

## Analysis—Group B:

The estimated development for cities in Group B was also taken from Curves Showing Historic Development—Dallas Gas Company, 1908-1930.

In the case of Group B the development period was reduced to five years. This development period conforms to the history of domestic meter and use saturation in cities of this class. From this graph there has been developed the percentages of idle plant, domestic basis, by development years for Group B:

Development Year	Average Percent of Plant Idle	Average Percent of Plant Active
1 .....	78.00	22.00
2 .....	48.25	51.75
3 .....	29.00	71.00
4 .....	15.50	84.50
5 .....	5.00	95.00

## Analysis of Group C:

The actual history of business development was available for typical towns classified under Group C. Seven towns in the State of Oklahoma having gas service for more than four years were analyzed. These towns range from the smaller towns (Achille) to the larger towns (Durant) in Group C and form a representative basis for the normal behavior of Group C in the matter of the development of domestic business.

The following tabulations set out the results of this analysis:

## Defendant's Exhibit No. 28—Continued

[fol. 8554]

Town	First Year Av. No. of Consumers	Second Year Av. No. of Consumers	Third Year Av. No. of Consumers	Fourth Year Av. No. of Consumers
Achille.....	20	25	27	36
Davidson.....	48	91	102	112
Durant.....	894	1,155	1,220	1,343
Frederick.....	374	653	779	821
Hollis.....	166	423	552	563
Tipton.....	126	295	375	397
Waurika.....	189	258	297	297
Totals.....	<u>1,817</u>	<u>2,900</u>	<u>3,352</u>	<u>3,569</u>

Weighted percent meter  
saturation.....

50.9

81.3

93.9

100

## First Year

Town	Av. No. of Consumers	Average Consumption M. Cu. Ft.	Total M. Cu. Ft. Consumption
Achille.....	20	36.3	726.0
Davidson.....	48	55.6	2,668.8
Durant.....	894	71.2	63,652.8
Frederick.....	374	72.3	27,040.2
Hollis.....	166	60.6	10,059.6
Tipton.....	189	24.7	4,668.3
Waurika.....	126	32.8	4,132.8
Totals.....	<u>1,817</u>	<u>62.16</u>	<u>112,948.5</u>

Weighted percent of consumption 68.08

## Second Year

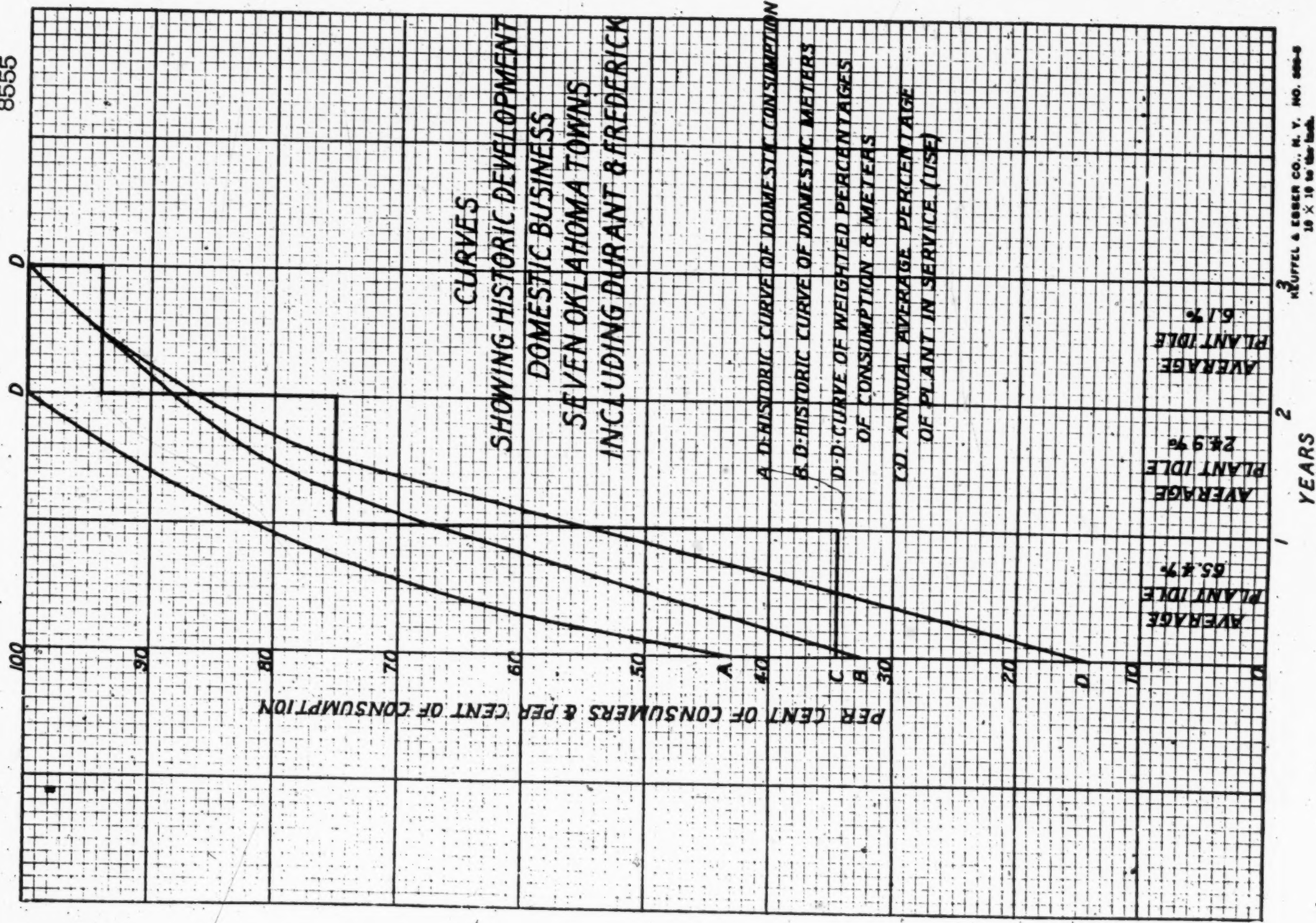
Town	Av. No. of Consumers	Average Consumption M. Cu. Ft.	Total M. Cu. Ft. Consumption
Achille.....	25	59.8	1,495.0
Davidson.....	91	86.2	7,844.2
Durant.....	1,155	71.0	79,875.0
Frederick.....	653	91.2	59,553.6
Hollis.....	423	116.2	49,110.3
Tipton.....	258	83.7	21,594.6
Waurika.....	295	85.7	25,281.5
Totals.....	<u>2,900</u>	<u>84.4</u>	<u>244,754.2</u>

Weighted percent of consumption 92.4.

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## Defendant's Exhibit No. 28—Continued

(fol. 8556)

## Third Year

Town	Av. No. of Consumers	Average Consumption M. Cu. Ft.	Total M. Cu. Ft. Consumption
Achille.....	27	63.5	1,714.5
Davidson.....	102	91.7	9,353.4
Durant.....	1,220	80.6	98,332.0
Frederick.....	779	98.0	76,342.0
Hollis.....	552	109.1	60,223.2
Tipton.....	297	90.9	26,997.3
Waurika.....	375	88.1	33,037.5
Totals.....	<u>3,352</u>	<u>91.3</u>	<u>305,999.9</u>

Weighted per cent of consumption 100.

This statistical data is shown in graphic form in Curves Showing Historic Development Seven Oklahoma Towns. From this graph there has been developed the percentages of idle plant, domestic basis, by development years for Group C.

Development Year	Average Percent of Plant Idle	Average Percent of Plant Active
1.....	65.4	34.6
2.....	24.9	75.1
3.....	6.1	93.9
4.....	0.0	100.0

In connection with the foregoing estimates of the percentages of idle plant during the domestic business development period for the three groups of cities and towns served by Lone Star Gas Company, the following general comment is offered.

The historical development of the domestic business of Dallas and County Gas Companies that was used as the basis for the calculations for both Group A and Group B was initiated with rates for domestic service substantially below rates now in effect and substantially lower than any rates that could be made at the initiation of service in the reproduction of Lone Star Gas Company. For this reason [fols. 8557-8563] the historical acquisition of domestic business in the Dallas Metropolitan area up to 1920 proceeded more rapidly than could be the case under rate schedules that would necessarily apply in reproduction as of January 1, 1933.



In the historical development of the domestic business of Group C, the time taken for the analysis was during a period of prosperity and easy credit. This also applies to the last ten years of the analysis for Group A and Group B.

Under present economic conditions, the estimated rate of saturation could not be attained in practice, and for this reason the development period would be extended and percentages of idle plant at successive stages of this period substantially increased.

In this estimate of the cost of business development, none of the effects of these factors has been applied to the results of the calculations.

**The Percentage of the Total Domestic Business of Lone Star Gas Company Represented by the Group of Cities and Towns Receiving Service at the End of the First Construction Year:**

(NOTE.) The following tabulations are from the records of the company, year ended September 30, 1931. The percentages used would not be modified by the use of the records of a later date.

Towns Group A:	Amount	Percent of Lone Star Total Domestic Sales.
Dallas		
Dallas Gas Company.....	\$1,585,176.68	
County Gas Company.....	815,015.41	
Fort Worth Division.....	1,303,408.72	
Total.....	<u>\$3,703,600.81</u>	51.15

## Defendant's Exhibit No. 28—Continued

[fol. 8564]

## Third Year (Cont'd)

Towns	Amount	Percent of Lone Star Total Domestic Sales
Group C (Cont'd)		
Pauls Valley.....	\$22,826.00	
Paoli.....	1,026.40	
Purcell.....	11,921.20	
Ryan.....	5,011.20	
Snyder Oklahoma.....	6,510.40	
Sulphur.....	18,808.00	
Tipton.....	8,224.40	
Walters.....	18,075.60	
Waurika.....	12,922.00	
Wayne.....	1,908.00	
Wynnewood.....	10,152.80	
Byers.....	3,987.60	
Petrolia.....	5,015.20	
Bellevue.....	3,512.00	
Sunset.....	1,536.40	
Alvord.....	4,805.60	
Iowa Park.....	11,530.80	
Temple Oklahoma.....	9,244.80	
Community Natural Gas Company		
Right-of-Way Sales.....	65,479.60	
Miscellaneous.....	3,947.80	
Total.....	\$1,110,287.40	15.32
Lone Star Gas Company Total Domestic Sales 12 months ended September 1931.....	\$7,240,419.68	
Recapitulation		
First Year		
Group A.....	\$3,703,600.81	51.15
Group B.....	1,126,296.64	15.56
Group C.....	212,026.70	2.94
	\$5,041,924.15	69.65
Second Year		
Group B.....	\$336,509.60	4.65
Group C.....	751,698.53	10.38
	1,088,208.13	15.03
Third Year		
Group C.....	\$1,110,287.40	15.32
	1,110,287.40	15.32
Total.....	\$7,240,419.68	100.00

[fol. 8565] From the data derived from the analyses of the rate at which the three groups of cities and towns would acquire their saturation of domestic meters and customer use, and from the determination of the percentage of the total domestic business of Lone Star Gas Company represented by the three groups that would be attached to the system, it is possible to calculate by years the percentage of the total plant that would be idle during the development period.

The following tabulations set out the percentage of the total plant idle, domestic bases, during each of the six development years. It will be noted that for the first development year only the plant constructed in the First Construction Year would be in service, and that for the Second Development Year only the plant constructed in the First and Second Construction Years would be in service. For this reason, the indicated percentages of the total plant idle for each of these development years will be reduced in the final calculations by the application of the percentage of the total plant in service in each of these years to the indicated percentage idle.

## First Development Year

Group	Percent of Total Dom. Sales	Percent of Saturation	Percent of Total Plant Active	Percent of Total Plant Idle
Group A (1)...	51.15	22.00	11.25	.....
Group B (1)....	15.56	22.00	3.42	.....
Group C (1)....	2.94	34.60	1.02	.....
			<u>15.69</u>	<u>84.31</u>

(Note) First Year's Construction in service.

[fol. 8566]

## Second Development Year

Group	Percent of Total Dom. Sales	Percent of Saturation	Percent of Total Plant Active	Percent of Total Plant Idle
Group A (1)....	51.15	44.50	22.76	.....
Group B (1)....	15.56	51.75	8.05	.....
Group B (2)....	4.65	22.00	1.02	.....
Group C (1)....	2.94	75.10	2.21	.....
Group C (2)....	10.38	34.60	3.59	.....
			<u>37.63</u>	<u>62.37</u>

(Note) First and Second Year's construction in service.

## Third Development Year

Group	Percent of Total Dom. Sales	Percent of Saturation	Percent of Total Plant Active	Percent of Total Plant Idle
Group A (1)....	51.15	64.00	32.74	.....
Group B (1)....	15.56	71.00	11.05	.....
Group B (2)....	4.65	51.75	2.41	.....
Group C (1)....	2.94	93.90	2.76	.....
Group C (2)....	10.38	75.10	7.80	.....
Group C (3)....	15.32	34.60	5.30	.....
			<u>62.06</u>	<u>37.94</u>

(Note) Total plant in service.

## Defendant's Exhibit No. 28—Continued

## Fourth Development Year

Group	Percent of Total Dom. Sales	Percent of Saturation	Percent of Total Plant Active	Percent of Total Plant Idle
Group A (1)....	51.15	77.50	39.64	.....
Group B (1)....	15.56	84.50	13.15	.....
Group B (2)....	4.65	71.00	3.30	.....
Group C (1)....	2.94	100.00	2.94	.....
Group C (2)....	10.38	93.90	9.75	.....
Group C (3)....	15.32	75.10	11.51	.....
			<u>80.29</u>	<u>19.71</u>

(Note) Total plant in service.

[fol. 8567]

## Fifth Development Year

Group	Percent of Total Dom. Sales	Percent of Saturation	Percent of Total Plant Active	Percent of Total Plant Idle
Group A (1)....	51.15	87.50	44.76	.....
Group B (1)....	15.56	95.00	14.78	.....
Group B (2)....	4.65	84.50	3.93	.....
Group C (1)....	2.94	100.00	2.94	.....
Group C (2)....	10.38	100.00	10.38	.....
Group C (3)....	15.32	93.90	14.39	.....
			<u>91.18</u>	<u>8.82</u>

(Note) Total plant in service.

## Sixth Development Year

Group	Percent of Total Dom. Sales	Percent of Saturation	Percent of Total Plant Active	Percent of Total Plant Idle
Group A (1)....	51.15	96.00	49.10	.....
Group B (1)....	15.56	100.00	15.56	.....
Group B (2)....	4.65	95.00	4.42	.....
Group C (1)....	2.94	100.00	2.94	.....
Group C (2)....	10.38	100.00	10.38	.....
Group C (3)....	15.32	100.00	15.32	.....
			<u>97.72</u>	<u>2.28</u>

(Note) Total plant in service.

Annual Rates for Interest, Depreciation and Taxes to be  
Applied to the Cumulative Percentage of Reproduction  
Cost Found To Be Idle During Development Period.

## Interest:

While that portion of the property of Lone Star Gas  
Company that would be in operation during the develop-

ment period would legally be entitled to the application of an annual rate based upon what constituted a fair return for the use of the property, in this estimate an annual rate of 8%, identical with the annual rate used in the calculation of Interest During Construction, has been used.

[fol. 8568] The relation between the loss of interest during construction on that portion of the total cost represented by the plant that would be wholly idle, and the loss of return on that portion of the total cost represented by the plant that is operative but unsaturated during the development period is a very close one. In this estimate a distinction has been made between them insofar as the annual rate, expressed as a percentage and applied to cost of idle plant, is concerned. Eight percent has been applied to the percent of total plant idle during the first and second development years. For the four succeeding development years ten percent has been applied.

#### Depreciation:

The weighted annual rate of reserve for depreciation and amortization for the property of Lone Star Gas Company subject to depreciation and amortization, expressed as a percent per annum, has been determined to be approximately 6.00 percent.

The following tabulation sets out the items of property and the individual annual rates from which this weighted rate was obtained:

Item	Annual Rate of Reserve
Gas well construction and equipment .....	13.60%
Drilling and cleaning equipment .....	
Well lines .....	14.34%
Main transmission lines .....	5.66%
Field compressor stations and structures .....	6.23%
Main line compressor stations and structures .....	5.20%
General office structure .....	3.00%
General office equipment .....	10.50%
General shop equipment .....	10.00%
General garage equipment .....	
Telephone system .....	5.65%
Construction tools and equipment .....	25.00%

These rates, which are exclusive of the charges for cancelled and surrendered leases, dry hole expense, and deple-

tion, were determined for Lone Star Gas Company as a going concern with saturation complete.

[fol. 8569] In the reproduction of the property, these annual rates would be subject to certain modifications, Depreciation on the General Office Structure has been included as a part of Other General Costs during the Pre-Construction and Construction Periods. Depreciation on Office Furniture and Fixtures has been charged to the costs of the various departmental sections.

The annual rates set out for well lines, main gathering lines, gas well construction and equipment, and field compressor stations are in part a function of the rate of use of gas, and for this reason would be less during a period of business acquisition than during the periods when saturation was complete.

In view of these facts, together with the fact that the property would be new, the annual rate has been modified to conform to the conditions that would be met in reproduction and the following schedule has been adopted:

Period	Annual Rate of Reserve
First Development Year .....	3.0%
Second Development Year .....	3.5%
Complete Plant—Third Development Year ..	4.0%
Complete Plant—Fourth Development Year ..	4.5%
Complete Plant—Fifth Development Year ....	5.0%
Complete Plant—Sixth Development Year ....	5.5%

#### Taxes:

As developed under Taxes During Construction, the annual tax factor applicable to the public service property of Lone Star Gas Company for the year ended December 31, 1931, was \$301,820 after giving effect to the fact that taxes on General Office Land, General Office Structure, Other General Land (Parking Lot) and Furniture and Fixtures had been included as a part of Other General Costs.

[fol. 8570] The Percentage of the Reproduction Cost of Lone Star Gas Company as of January 1, 1933, Completed During Each Construction Year:

From the calculations in Expenditures by Periods, it was determined that the percentage of total expenditures, \$64,-



488,917, passing into service during each construction year, would be as follows:

Construction Period—First Year .....	43.30%
Construction Period—Second Year .....	36.66%
Construction Period—Third Year .....	20.04%

Calculations of Fixed Charges on Idle Plant

(1.) Interest and Return

First Development Year

Total Plant in Service.....	43.30%
Total Plant Active.....	15.68%

Per Cent of Total Plant Idle..... 27.62%

27.62% of \$64,488,917 = \$17,811,839

\$17,811,839 at 8% for one Year..... \$1,424,947

Second Development Year

Total Plant in Service.....	79.96%
Total Plant Active.....	37.63%

Per Cent of Total Plant Idle..... 42.33%

42.33% of \$64,488,917 = \$27,298,159

\$27,298,159 at 8% for one Year..... \$2,183,853

Third Development Year

Total Plant in Service.....	100.00%
Total Plant Active.....	62.06%

Per Cent of Total Plant Idle..... 37.94%

37.94% of \$64,488,917 = \$24,467,095

\$24,467,095 at 10% for one Year..... \$2,446,710

[fol. 8571]

Fourth Development Year

Total Plant in Service.....	100.00%
Total Plant Active.....	80.29%

Per Cent of Total Plant Idle..... 19.71%

19.71% of \$64,488,917 = \$12,710,766

\$12,710,766 at 10% for one Year..... \$1,271,077

Fifth Development Year

Total Plant in Service.....	100.00%
Total Plant Active.....	91.18%

Per Cent of Total Plant Idle..... 8.82%

8.82% of \$64,488,917 = \$5,687,922

\$5,687,922 at 10% for one Year..... \$568,792

## Defendant's Exhibit No. 28—Continued

## Sixth Development Year

Total Plant in Service.....	100.00%
Total Plant Active.....	97.72%

Per Cent of Total Plant Idle..... 2.28%

2.28% of \$64,488,917 = \$1,470,347

\$1,470,347 at 10% for one Year..... \$147,035

## Recapitulation of Loss of Return on Idle Plant

First Development Year.....	\$1,424,947
Second Development Year.....	2,183,853
Third Development Year.....	2,446,710
Fourth Development Year.....	1,271,077
Fifth Development Year.....	568,792
Sixth Development Year.....	147,035
Total.....	<u>\$8,042,414</u>

## (2.) Depreciation:

Of the total reproduction cost \$64,488,917, \$4,474,272 representing Preliminary Development and Organization Costs was determined to be non-depreciable, therefore, the total reproduction cost upon which depreciation on idle plant has [fol. 8572] been calculated is fixed at \$60,014,645.

From the preceding analysis, certain percentages of the plant were found to be idle during each of these development years. In the following tabulation, these percentages are applied to the total reproduction cost subject to depreciation.

First Development Year	\$60,014,645 x 26.10%.....	\$15,663,822
Second Development Year	\$60,014,645 x 40.88%.....	24,533,987
Third Development Year	\$60,014,645 x 37.94%.....	22,769,556
Fourth Development Year	\$60,014,645 x 19.71%.....	11,828,887
Fifth Development Year	\$60,014,645 x 8.82%.....	5,293,292
Sixth Development Year	\$60,014,645 x 2.28%.....	1,368,334

The above figures are the estimated reproduction cost of the property as a whole (without consideration for certain minor items of property not subject to depreciation) subject to depreciation that would be idle during each of the development years.

## Defendant's Exhibit No. 28—Continued

First Development Year	
Reproduction Cost Plant Idle.....	\$15,663,822
Times Depreciation Rate.....	3.0%
Depreciation on Idle Plant.....	<u>\$469,915</u>
Second Development Year	
Reproduction Cost Plant Idle.....	\$24,533,987
Times Depreciation Rate.....	3.5%
Depreciation on Idle Plant.....	<u>\$858,690</u>
Third Development Year	
Reproduction Cost Plant Idle.....	\$22,769,556
Times Depreciation Rate.....	4.0%
Depreciation on Idle Plant.....	<u>\$910,782</u>
Fourth Development Year	
Reproduction Cost Plant Idle.....	\$11,828,887
Times Depreciation Rate.....	4.5%
Depreciation on Idle Plant.....	<u>\$532,300</u>
[fol. 8573]	
Fifth Development Year	
Reproduction Cost Plant Idle.....	\$5,293,292
Times Depreciation Rate.....	5.0%
Depreciation on Idle Plant.....	<u>\$264,665</u>
Sixth Development Year	
Reproduction Cost Plant Idle.....	\$1,368,334
Times Depreciation Rate.....	5.5%
Depreciation on Idle Plant.....	<u>\$75,258</u>
Recapitulation of Depreciation on Idle Plant	
First Development Year.....	\$469,915
Second Development Year.....	858,690
Third Development Year.....	910,782
Fourth Development Year.....	532,300
Fifth Development Year.....	264,665
Sixth Development Year.....	75,258
Total.....	<u>\$3,111,610</u>

## Defendant's Exhibit No. 28—Continued

## (3.) Taxes

## First Development Year

Percent of Taxable Property in Service	46.91%
Percent of Plant Active.....	15.68%

Percent Idle..... 31.23%

Total Taxes \$301,820

Taxes on Idle Plant \$301,820 x 31.23%..... \$94,258

## Second Development Year

Percent of Taxable Property in Service	81.79%
Percent of Plant Active.....	37.63%

Percent Idle..... 44.16%

Total Taxes \$301,820

Taxes on Idle Plant \$301,820 x 44.16%..... \$133,284

## Third Development Year

Percent of Taxable Property in Service	100.00%
Percent of Plant Active.....	62.06%

Percent Idle..... 37.94%

[fol. 8574]

Total Taxes \$301,820

Taxes on Idle Plant \$301,820 x 37.94%..... \$114,511

## Fourth Development Year

Percent of Taxable Property in Service	100.00%
Percent of Plant Active.....	80.29%

Percent Idle..... 19.71%

Total Taxes \$301,820

Taxes on Idle Plant \$301,820 x 19.71%..... \$59,489

## Fifth Development Year

Percent of Taxable Property in Service	100.00%
Percent of Plant Active.....	91.18%

Percent Idle..... 8.82%

Total Taxes \$301,820

Taxes on Idle Plant \$301,820 x 8.82%..... \$26,621

## Defendant's Exhibit No. 28—Continued

## Sixth Development Year

Percent of Taxable Property in Service 100.00%

Percent of Plant active..... 97.72%

Percent Idle..... 2.28%

Total Taxes \$301,820

Taxes on Idle Plant \$301,820 x 2.28%..... \$6,881

## Recapitulation of Taxes on Idle Plant

First Construction Year..... \$94,258

Second Construction Year..... 133,284

Third Construction Year..... 114,511

Fourth Construction Year..... 59,489

Fifth Construction Year..... 26,621

Sixth Construction Year..... 6,881

Total..... \$435,044

## [fol. 8575] Credits to Fixed Charges on Idle Plant by Reason of Net Revenues From the Sale of Industrial Gas:

As set out in the preliminary discussion of Going Value and the Cost of Business Development as a measure of Going Value, all calculations with reference to the percentage of plant that would be idle after having passed into service were based upon the estimated rate of acquisition of the domestic business of Lone Star Gas Company as of January 1, 1933. In view of this basic assumption it is obvious that such net revenues as would be derived from the sale of industrial gas during the periods in which the cost of business development was established by the application of return, taxes and depreciation to the reproduction cost of the plant idle, would be a credit to the overall costs thus developed. It is necessary, therefore, to make a determination of the rate of acquisition of industrial gas sales, and to estimate the net revenue from such sales concurrent with the acquisition of domestic business in order to arrive at a proper estimate of the true cost of business development.

Following the methods of estimate adopted with reference to the acquisition of domestic business, a careful analysis was made of the probable development of the industrial business of Lone Star Gas Company as of January 1, 1932, and the probable net revenues that would be secured from

this class of sales. No material change has taken place in the industrial sales of Lone Star Gas Company since the date of this analysis, and the estimated credits based on net revenue from industrial sales would not be affected by the results of a similar study made as of January 1, 1933.

#### Organization Plan of Industrial Sales Section:

[fol. 8576] In the general organization plan as indicated by the organization chart, the Industrial Sales Section was made a part of the group whose expenses would be attributable to the cost of reproduction. No estimate of cost, however, was included in Undistributed General Costs for the reason that the expenses of the Section during the period of business development would more logically become a deduction from the gross revenues from industrial sales, and these expenses have been so treated in the estimate.

The Industrial Gas Section would be organized immediately upon the completion of corporate organization by the employment of the industrial engineer who would in turn engage the personnel of the Section, and proceed with the detail work hereinafter outlined.

This step would be necessary by reason of the fact that the surveys, reports, and other market data secured by the originating group would not contain the detailed technical information that would be required for negotiations with owners of industrial plants using other forms of fuel. A complete detailed study of the characteristics and requirements of each industrial plant proposed to be served, would be made before negotiations for conversion could be definitely begun.

In order to properly contact the prospective industrial consumers (the industrial consumers of Lone Star Gas Company as of January 1, 1932, the industrial customers temporarily inactive at this date, and the prospective customers who would be unsuccessfully solicited) the following organization would be required:

#### Pre-Construction Period (and First Construction Year:

Chief Industrial Engineer.

Assistant Industrial Engineer.

Ten Industrial Sales Engineers.

Draftsman.

Stenographer.



[fol. 8577] Second Construction Year:

Chief Industrial Engineer.  
 Chief Industrial Engineer.  
 Assistant Industrial Engineer.  
 Office Engineer.  
 Twenty Industrial Sales Engineers.  
 Draftsman.  
 Stenographer.

Third Construction Year:

Chief Industrial Engineer.  
 Assistant Industrial Engineer.  
 Office Engineer.  
 Thirty Industrial Sales Engineers.  
 Two Draftsmen.  
 Two Stenographers.

First Year Plant Wholly Operative:

Chief Industrial Engineer.  
 Assistant Industrial Engineer.  
 Office Engineer.  
 Twenty Five Industrial Sales Engineers.  
 Draftsman.  
 Two Stenographers.

Second Year Plant Wholly Operative:

Chief Industrial Engineer.  
 Assistant Industrial Engineer.  
 Office Engineer.  
 Fifteen Industrial Sales Engineers.  
 Draftsman.  
 Two Stenographers.

The chief industrial engineer would be responsible for the work of the Section, and the direction of its personnel. He would necessarily be a man thoroughly trained in combustion engineering, familiar with the design and installation of gas burning equipment, and in addition to his technical qualifications, he would possess qualities of salesmanship. The sales engineers would be required to make detailed surveys of industrial plants, select or design the proper gas burning equipment for individual plants, install the equipment, and supervise the initial tests until proper utilization would be secured.

[fol. 8578] Each of the men engaged in the work would be required to have practical experience as well as technical training, and for this reason they could only be secured from the personnel of operating natural gas companies, or from the manufacturers of gas burning equipment. The following schedule of salaries give effect to this fact as well as to the fact that as the company passed into operation and gave permanent employment to the individual employees of the Section there would be a normal reduction in salaries.

	Rate Per Month	Rate Per Annum
Schedule of Salaries—Development Period		
Chief Industrial Engineer.....	\$500	\$6,000
Assistant Industrial Engineer.....	300	3,600
Office Engineer.....	250	3,000
Senior Sales Engineers.....	250	3,000
Junior Sales Engineers.....	200	2,400
Draftsmen.....	150	1,800
Stenographers.....	110	1,320

Schedule of Salaries—Operating Period		
Chief Industrial Engineer.....	450	5,400
Assistant Industrial Engineer.....	250	3,000
Office Engineer.....	175	2,100
Senior Sales Engineers.....	225	2,700
Junior Sales Engineers.....	200	2,400
Draftsman.....	150	1,800
Stenographer.....	110	1,320

#### Distribution of Salaries by Periods

##### Pre-Construction Period

Chief Industrial Engineer.....	Six Months.....	\$3,000
Assistant Industrial Engineer.....	Six Months.....	1,800
Ten Industrial Sales Engineers.....	Six Months.....	15,000
Draftsman.....	Six Months.....	900
Stenographer.....	Six Months.....	660

Total..... \$21,360

##### Construction Period—First Year

Chief Industrial Engineer.....	\$6,000
Assistant Industrial Engineer.....	3,600
Ten Industrial Sales Engineers.....	30,000
Draftsman.....	1,800

[fol. 8579]

Stenographer..... 1,320

Total..... \$42,720

21987

## Defendant's Exhibit No. 28—Continued

## Construction Period—Second Year

Chief Industrial Engineer.....	\$6,000
Assistant Industrial Engineer.....	3,600
Office Engineer.....	3,000
Fifteen Industrial Sales Engineers.....	45,000
Five Industrial Sales Engineers.....	12,000
Draftsman.....	1,800
Stenographer.....	1,320

Total.....\$72,720

## Construction Period—Third Year

Chief Industrial Engineer.....	\$6,000
Assistant Industrial Engineer.....	3,600
Office Engineer.....	3,000
Fifteen Sales Engineers.....	45,000
Fifteen Sales Engineers.....	36,000
Two Draftsmen.....	3,600
Two Stenographers.....	2,640

Total.....\$99,840

## Post-Construction Period—First Year

Chief Industrial Engineer.....	\$5,400
Assistant Industrial Engineer.....	3,000
Office Engineer.....	2,100
Fifteen Sales Engineers.....	40,500
Ten Sales Engineers.....	12,000
Draftsman.....	1,800
Two Stenographers.....	2,640

Total.....\$67,440

## Post-Construction Period—Second Year

Chief Industrial Engineer.....	\$5,400
Assistant Industrial Engineer.....	3,000
Fifteen Sales Engineers.....	40,500
Draftsman.....	1,800
Stenographer.....	1,320

Total.....\$52,020

## Defendant's Exhibit No. 28—Continued

[fol. 8580]

## Stationery, Office Supplies, and Special Supplies by Periods

## Pre-Construction Period

Stationery and Office Supplies.....	\$756
Chemicals and Repairs to Instruments.....	

Total.....	<u>\$756</u>
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## Construction Period—First Year

Stationery and Office Supplies.....	\$1,512
Chemicals and Repairs to Instruments.....	200

Total.....	<u>\$1,712</u>
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## Construction Period—Second Year

Stationery and Office Supplies.....	\$2,520
Chemicals and Repairs to Instruments.....	1,000

Total.....	<u>\$3,520</u>
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## Construction Period—Third Year

Stationery and Office Supplies.....	\$3,696
Chemical- and Repairs to Instruments.....	2,000

Total.....	<u>\$5,696</u>
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## Post-Construction Period—First Year

Stationery and Office Supplies.....	\$3,108
Chemicals and Repairs to Instruments.....	1,500

Total.....	<u>\$4,608</u>
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## Post-Construction Period—Second Year

Stationery and Office Supplies.....	\$1,932
Chemicals and Repairs to Instruments.....	1,500

Total.....	<u>\$3,432</u>
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## Transportation Expense by Periods

## Pre-Construction Period

Equipment: One Standard Buick.....	\$1,226
Eleven Chevrolets.....	6,380
One Ford Pick-up.....	555

Total.....	<u>\$8,161</u>
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## Defendant's Exhibit No. 28—Continued

## [fol. 8581] Pre-Construction Period

Depreciation: \$192 per month for six months.....	\$1,152
Operation: Buick 4.5 cents per mile	
Chevrolets and Ford 4 cents per mile	
Buick 9,000 miles at 4.5 cents per mile.....	405
Chevrolets 132,000 miles at 4 cents per mile.....	5,280
Ford 6,000 miles at 4 cents per mile.....	240
Interest 8 per cent of \$8,161 for six months.....	326
Total.....	<u>\$7,403</u>

## Construction Period—First Year

Equipment: One Standard Buick.....	\$1,226
Eleven Chevrolets.....	6,380
One Ford Pick-up.....	555
Total.....	<u>\$8,161</u>

Depreciation: \$192 per month for twelve months....	\$2,304
Operation:	
Buick 18,000 miles at 4.5 cents per mile.....	810
Chevrolets 264,000 miles at 4 cents per mile.....	10,560
Ford 12,000 miles at 4 cents per mile.....	480
Interest 8 per cent of \$8,161 for one year.....	653
Total.....	<u>\$14,807</u>

## Construction Period—Second Year

Equipment: One Standard Buick.....	\$1,226
Twenty One Chevrolets.....	12,180
One Ford Pick-up.....	555
Total.....	<u>\$13,961</u>

Depreciation: \$332 per month for twelve months....	\$3,984
Buick 21,800 miles at 4.5 cents per mile.....	972
Chevrolets 630,000 miles at 4 cents per mile.....	25,200
Ford 12,000 miles at 4 cents per mile.....	480
Interest 8 per cent on \$13,961 for twelve months..	1,117
Total.....	<u>\$31,753</u>

## Construction Period—Third Year

Equipment: One Standard Buick.....	\$1,226
Thirty One Chevrolets.....	17,980
One Ford Pick-up.....	555
Total.....	<u>\$19,761</u>

Depreciation: \$470 per month for twelve months....	\$5,640
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## Defendant's Exhibit No. 28—Continued

## [fol. 8582] Operation:

## Construction Period—Third Year

Buick 24,000 miles at 4.5 cents per mile.....	1,080
Chevrolets 744,000 miles at 4 cents per mile.....	29,760
Ford 12,000 miles at 4 cents per mile.....	480
Interest 8 per cent on \$19,761 for twelve months..	1,581
Total.....	<u>\$38,541</u>

## First Year—Plant Wholly Operative

Equipment: One Standard Buick.....	\$1,226
Twenty Six Chevrolets.....	15,080
One Ford Pick-up.....	555
Total.....	<u>\$16,861</u>

Depreciation: \$400 per month for twelve months.... \$4,800

## Operation:

Buick 24,000 miles at 4.5 cents per mile.....	1,080
Chevrolets 780,000 miles at 4 cents per mile.....	31,200
Ford 12,000 miles at 4 cents per mile.....	480
Interest 8 per cent on \$16,861 for twelve months..	1,340

Total..... \$38,909

## Second Year—Plant Wholly Operative

Equipment: One Standard Buick.....	\$1,226
Sixteen Chevrolets.....	9,280
One Ford Pick-up.....	555
Total.....	<u>\$11,061</u>

Depreciation: \$264 per month for twelve months.... \$3,168

## Operation:

Buick 24,000 miles at 4.5 cents per mile.....	1,080
Chevrolets 480,000 miles at 4 cents per mile.....	19,200
Ford 12,000 miles at 4 cents per mile.....	480
Interest 8 per cent on \$11,061 for twelve months..	885

Total..... \$24,813

## Traveling Expenses by Periods

## Pre-Construction Period

## Chief Engineer

60 days at \$5.00 per day..... \$300

## Sales Engineers

1320 days at \$4.00 per day..... 5,280

Total..... \$5,580



## Defendant's Exhibit No. 28—Continued

## [fol. 8583] Construction Period—First Year

Chief Engineer	
120 days at \$5.00 per day .....	\$600
Sales Engineers	
2840 days at \$4.00 per day .....	10,560
Total .....	<u>\$11,160</u>

## Construction Period—Second Year

Chief Engineer	
120 days at \$5.00 per day .....	\$600
Sales Engineers	
5040 days at \$4.00 per day .....	20,160
Total .....	<u>\$20,760</u>

## Construction Period—Third Year

Chief Engineer	
120 days at \$5.00 per day .....	\$600
Sales Engineers	
7440 days at \$4.00 per day .....	29,760
Total .....	<u>\$30,360</u>

## First Year—Plant Wholly Operative

Chief Engineer	
120 days at \$5.00 per day .....	\$600
Sales Engineers	
6240 days at \$4.00 per day .....	24,960
Total .....	<u>\$25,560</u>

## Second Year—Plant Wholly Operative

Chief Engineer	
120 days at \$5.00 per day .....	\$600
Sales Engineers	
3840 days at \$4.00 per day .....	15,360
Total .....	<u>\$15,960</u>

## Communication Expense by Periods

## Pre-Construction Period

Two Telephones at \$6.60 per month for six months ..	\$79
Telegrams and Tolls \$15 per day for 150 days .....	2,250
Total .....	<u>\$2,329</u>

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